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SCIENCE FICTION MAGAZINE

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EDITORIAL

IRONY



by Isaac Asimov

It is well-known that I know nothing about the craft of writing in any formal way. I say so myself—constantly. Being an editorial director, however, has its demands and duties. I must answer letters from readers, for instance, and take into account any unhappiness they may have with stories and editorial policy. And that means I am sometimes forced to think about writing techniques.

That brings me to the subject at hand, the matter of the use of irony by writers.

In the March 1984 issue, I discussed satire. The two are often lumped together, and, in fact, sometimes confused and treated as though they were synonymous. They are not!

Satire, as I explained, achieves its purpose of castigating the evils of humanity and society by exaggeration. It puts those evils under a magnifying glass with the intention of making them clearly visible.

Irony does it differently. You can get a hint from the fact that "irony" is from a Greek word meaning "dissimulation." An ironist must pretend, and the classic ironist was Socrates, who in his discussions with others would relentlessly pre-

tend ignorance and ask all kinds of naive questions designed to trap an overconfident adversary into rashly taking positions that then proved to be indefensible under further naive questioning by Socrates.

Naturally, Socrates was *not* ignorant and the questions were *not* naive, and his method of procedure is known as "Socratic irony." You may well believe that those who suffered under his bland lash did not grow to love him, and I suspect he fully earned his final draught of hemlock.

Socrates set the fashion for irony for all time. He pretended to be ignorant when he was actually piercingly intelligent, and ever since then, ironists have pretended to believe and say the opposite of what they wanted the reader to understand. Instead of exaggerating the evils they are denouncing, they reverse them and call them good.

The satirist induces laughter by his exaggeration, the ironist induces indignation by his reversal. The satirist is often good-natured, the ironist tends to be savage and bitter. Satire is a comparatively mild technique whose purpose is easily grasped. Irony is a difficult

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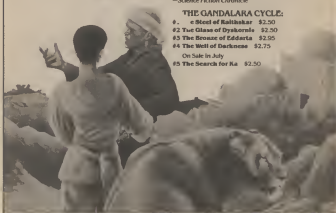
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technique whose point is frequently missed, and the ironist may find he is holding a two-edged sword and is himself badly gashed.

Most satirists find themselves indulging in irony sometimes, and I know exactly where I first encountered irony. I was reading Charles Dickens' *Pickwick Papers* for the first time (as a pre-teener) and in Chapter 2, I encountered Dickens' description of Tracy Tupman's zeal at "general benevolence." Said Dickens, "The number of instances . . . in which that excellent man referred objects of charity to the houses of other members for left-off garments or pecuniary relief is almost incredible."

I was astonished. I thought to myself that it wasn't very kind of Mr. Tupman to send poor people to other members instead of giving them something himself, so how could he be benevolent? And after a while, the light dawned. He *wasn't* benevolent. In fact, I decided indignantly, he was a stingy bum, and my liking for him was strictly limited for the rest of the book and ever since. I did not know that what I had just read was irony, but I understood the concept from that time on, and I eventually learned the word.

If you want a savage and prolonged bit of writing with a great deal of irony in it, I refer you to Mark Twain's *The Mysterious Stranger*, which was not published till after he was safely dead. I warn you, though, it's not pleasant reading. It certainly makes plain, however, Twain's bitter feelings about humanity and the assorted evils that seemed (to Twain, at any rate) to be inextricably bound up with

it. And it may, for a time at least, embitter you with humanity, too.

Even that, however, must take second place to the all-time high in caustic irony—a pamphlet by Jonathan Swift, published about 1730, entitled "A Modest Proposal for Preventing the Children of Poor People in Ireland from being a Burden to their Parents or Country and for Making them Beneficial to the Public." Swift served in Ireland and could see first hand, and with enormous indignation, the manner in which the English brutally and callously ground the Irish into helpless and hopeless poverty.

He therefore pointed out that since the only thing the Irish were allowed to produce and keep for their own use were their children, it would supply them with needed money, and others with needed food, if those Irish children were sold in order to be fattened and slaughtered for sale at the butcher's. With an absolutely straight face, and with incredible ingenuity, he pointed out all the advantages that would accrue from such cannibalism.

If anything could possibly have evoked shame and even reform from those responsible for the Irish plight, that pamphlet would have done it. Undoubtedly, many of those who read the pamphlet *were* shamed; some may even have altered their attitudes and behavior. By and large, however, the exploitation of the Irish continued unchanged for nearly two more centuries and the light that casts on humanity is not a good one.

And yet, you know, not everyone has a "sense of irony," which is by no means the same as a "sense of

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humor." I firmly believe that one can have one and not the other. It is possible to be confused by a pretense to believe the opposite of what you believe, as I was for a few minutes by Dickens' description of Tupman as benevolent. Of course, I caught on, but if I had lacked a sense of irony, I suppose I wouldn't have.

There were, actually, good and kindly people who read Swift's pamphlet with indignation, not at the mistreatment of the Irish, but at Swift's apparently callous and immoral advocacy of cannibalism. They thought he *meant it*, and denounced him with immeasurable vehemence.

And that finally brings me to Asimov's for sometimes what we publish contains irony, and if irony is hard to handle even for the absolute master of the art, good old Swift, you can understand that it is a slippery tool for lesser mortals.

In the February, 1984 issue, Tom Rainbow wrote a "Viewpoint" article entitled, "Sentience and the Single Extraterrestrial," that dealt with the requirements for such things as intelligence, sentience, and, self-awareness. He described the kind of extraterrestrials that might, or might not, possess such things.

From the title alone, you can tell that he is writing in the humorous mode, and indeed, when you read his essay, you will find that he is saying perfectly serious things in a deliberately funny way.

In one place, he uses irony. Having talked of the requirements of self-awareness in terms of brain/body ratios, he points out that women's brains are smaller

than men's but so are their bodies, leaving the brain/body ratio nearly the same in both sexes. (Actually, if there's an advantage it's on the side of women.) With heavy irony, he says, "... this reasoning leads to the somewhat startling conclusion that women must be *self-aware*."

How can one believe that Rainbow really thinks the conclusion is "startling"? He's using ironic dissimulation. He's *pretending* to think it's startling (and italicizing "self-aware" as a typographical indication of astonishment) in order for you to understand thoroughly that this is *not* startling and that people who consider women inferior beings are ignorant, and even stupid.

And to make it even plainer, he puts himself in the ironic position of these ignoramuses and says in the next sentence, "Heck, guys, if even *girls* can be self-aware, then there's hope for Giant Dill Pickles."

The use of the adolescent term "Heck," and the equally adolescent "guys," and the shift from "women" to italicized "girls" all show that he is not speaking in his own persona and that he has nothing but contempt for the attitude. He is relying, poor fellow, on his readers having a sense of irony.

Well, they do—by and large.

But there are always exceptions, and a few women have written indignant letters to point out that this was insulting. One said that it wasn't funny or cute.

No, indeed, Swift's advocacy of cannibalism wasn't funny or cute, either, but he was trying for something else.

To be sure, Swift's entire pamphlet was aimed at his target and

Rainbow was merely bringing in the matter of women's brains as a side-issue, and perhaps if he were doing it again, he might decide it would be more judicious not to indulge. —But please, women, the

man is on your side and tried to show it by the use of that two-edged sword, irony. You may think the irony didn't work, but that doesn't make Rainbow any enemy of womankind. ●



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LETTERS

Dear Editors,

I found the Viewpoint article by Meredith Olson quite interesting. I wonder if there is a similar explanation as to why some people do not like fantasy or SF at all, but instead enjoy only that fiction which is realistic. Also, I am interested in knowing what psychological science fiction is taught at M. Olson's school. When I was in high school, my teachers never assigned us to read anything that even remotely resembled SF.

On the topic of whether "Star Trek" leads women into the field, I can only offer my own experience. I began watching the series the year it debuted (I was then 10 years old).

What drew me to it was not the characters, whom I found only mildly interesting, but the whole concept of the ship itself plunging through space and exploring "strange new worlds." Two years later I happened to read a book by Ray Bradbury (*The Martian Chronicles*) because someone recommended it. That was the beginning of my long love affair with SF. I read first everything I could find by Bradbury, then went on to other writers. Bradbury may be known best for his poetic language, but here again it was the concept that

affected me, of space exploration and what we might find there and the moral factors involved. By then, I had given up on "Star Trek," off on its poor third (and last) season. What is interesting to me looking back on it now is that I do not feel that watching "Star Trek" led me into the SF field. I did not read SF because I had watched "Star Trek"; it was sheer coincidence that I happened to read a book by Bradbury one day.

What I do feel "Star Trek" gave me is perhaps a feeling of familiarity and comfort with SF concepts, knowing that I would find something of value there and knowing that it would be exciting. If it weren't for my early years watching "Star Trek," perhaps I would not have plunged into SF quite so readily.

Incidentally, I really enjoyed reading the story "Blued Moon" by Connie Willis. It's rare to find humor that well done. I hope you will be publishing more of her work. Sincerely,

Susan Santo

Fear not about our publishing Connie Willis. At the moment, she's one of the hottest properties in science fiction. All she has to do is to continue writing and submitting.

—Isaac Asimov

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Dear Shawna and Isaac,

Okay, I admit it. I am a glutton! The March 1984 *IASfm* arrived today and I consumed it all in one gulp. A marvelous repast!

I am in raptures over "Galatea"! Kristi Olesen deserves the respect and gratitude of all women (and men) for having so effectively expressed the age-old attitude many men (thankfully not all) have toward women and what that attitude can do to women, i.e. harden them. I will share it with many friends, many of whom do not read SF ordinarily. Perhaps by continuing to expose them to my favorites, the addiction will spread.

As for "Cyclops," it is another masterpiece from David Brin. He has a mighty nice mind. I look forward to hearing more from it.

And to you, Isaac, thank you for your excellent editorial "Satire." Your not-so-subtle hint about the reader needing to complain directly to the objects of the "Soul-savers" satire was definitely appropriate.

I hope you do not take it as an insult that I use your first names. It is just that you take such good care in providing mental stimulus to me that I think of you and most of your authors as first name basis friends.

In closing, thank you again for a marvelous magazine. I am firmly committed to resubscribing. Sincerely, respectfully, etc.,

Teresa M. Ash
Evansville, IN

P.S. Goodness! I forgot to mention "Street Magic" which I thoroughly enjoyed. Thank you, Ron Goulart, you enlightened human.

If you're going to be this articulately complimentary with regard to every aspect of the magazine, you may, of course, use our first names. Besides, everyone uses my first name, being quite un-awed by my great natural dignity.

—Isaac Asimov

Dear Dr. Asimov:

Congratulations on perfecting the timewarp! I received my February issue in late December. Another fine issue with a few exceptions. I'm not into India in any way, shape or form so I'm not qualified to really criticize "The Rim of the Wheel," but I didn't find much science fiction in it.

The other story I have to damn with faint praise is "What Seen But The Wolf" by Gregg Keizer. This story was very well written and would grace the pages of almost any magazine, but science fiction? I'm afraid not.

And now to a better part of the letter, the compliments. The rest of the issue was up to your usual high standards. "As Time Goes By" had enough plot twists and convolutions to keep me happy for a month. "Post Haste" was an exercise in silliness made ironic by the extremely early arrival of this issue. I always love Viewpoint; there's not enough hard science around any more.

How about a review of Star Fleet Battles in your gaming column? It's based on the "Star Trek" series and put out by Task Force Games. It would cost whoever buys the games about \$100.00 for all the expansions and other stuff and

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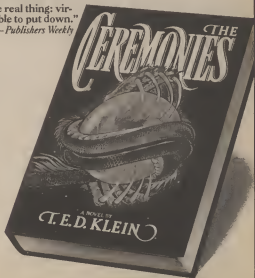
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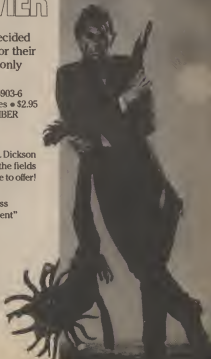
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take about six months to master (it's very complicated) but that's what makes it the best science fiction wargame I've ever seen.

I imagine when you read the first paragraph, you thought "Who's this jerk, to criticize when he hasn't submitted anything himself?" Well OK already, I didn't send in this letter for a lecture. Send me the material (SASE included) for new authors, if you still do that. You used to talk about that in every issue when the magazine first came out. I hope you still encourage new authors because I have an idea for a time travel story that's never been done before (that I've seen, anyway).

Tony Rogers

There's no time warp. You've got to understand that all magazines are dated ahead, because the date record is the date they come off the news-stand at the end of their run. If we put out the February issue in mid-February, the news-stands would get rid of them on March 1 (if not before).

—Isaac Asimov

Dear Ms. McCarthy,

I am a devoted SF reader and devour the *IASfm* as soon as the mailman-person delivers it into my mailbox next to my *Analog* and books from the SF-club.

As you can plainly see, I am totally addicted and, you will never believe this, was "turned on" by my mother, a bacteriologist who had handed her little girl "hard" SF at the tender age of ten and many years later, I became a biochemist.

There is always such a lot of hogwash written about female readers, who had been lured into SF by the green, pointed ears of Mr. Spock; if that's what it takes to have the younger female generation lured into some thought-provoking reading, so be it.

Don't get me wrong, I also have seen every "Star Trek" episode at least fifteen times and enjoyed it for its entertaining qualities.

My total relaxation is a good "hard" SF story, though I have nothing against "soft" SF or even Fantasy if it does not get too asinine.

For this reason, I love the mixed selections of your mag. As the Good Doctor pointed out in his Feb. Editorial, "You can't please all the people 100 percent of the time," but you please me, for what it's worth.

"Remembering Siri" by Dan Simmons was a very haunting story and ran through my head for several days.

I enjoy Viewpoint, and Mooney's Module, too.

There is only one section in your mag I don't read (I know, it is important) and it is "Market Place" as I do not need Oriental Ladies, either faithful or otherwise—or a degree by mail—got a couple and had to make them the hard way. My regards to the rest of your staff and please, keep up the good works.

Elfriede F.M. Vickery
Longview, TX

Sometimes a girl's best friend is her mother. And thanks very much for your kind words about the magazine. It's nice to have loyal and understanding readers.

—Isaac Asimov

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GAMING

by Dana Lombardy

If you enjoyed the movie *Road Warrior* as much as I did, you're going to find the boardgame *Battlecars* a lot of fun. The game was originally produced in England, and is now available in the U.S. from Games Workshop U.S. (\$18 at your local store, or direct from 9110F Red Branch Road, Columbia, MD 21045).

The story line for *Road Warrior* is a familiar SF theme: a few scattered humans struggle to survive in a post-holocaust Earth. Australia, which has been spared from the direct destruction of nuclear weapons, is slipping technologically as resources become scarce. Its population fights over dwindling supplies of "petrol" (gasoline) needed to run their vehicles in the never-ending quest for more fuel and food.

Gangs of marauders and assorted independents—the latter type including our hero—fight to the death for control of the highways and a few drops of fuel. Small pockets of civilization attempt to preserve humanity in this chaotic world, but the marauders (dressed in leather and punk outfits) are getting the upper hand. Enter the Road Warrior.

The movie featured some of the best special effects done for crash scenes and violence. *Road Warrior* has a strong cult following. Two games have been published with a similar highway warfare theme (although neither is based directly on

the movie): *Car Wars*, a role-playing game by SJ Games of Austin, Texas (reviewed in an earlier issue); and *Battlecars* by Games Workshop, both heavily influenced by the film.

The story line for *Battlecars* is that by the year 2080 automobile accidents are non-existent. Autoslot roads and computer controls safely direct electric cars. But those who long for the freedom and excitement of high-speed driving locate and restore old 20th Century sports cars. The cars are soon used for races, and it isn't long before a fatal accident adds the element of danger—and doubles attendance at the next race. By 2085 the races have evolved into gladiatorial contests and the sport of *Battlecars* is established.

Battlecars is a boardgame for two-to-four people played on a square grid, with movement from point to point (corner to corner). Two 8-by-11-inch boards are provided as the playing surface. There are no terrain features (buildings, trees, etc.) printed on the boards. Instead, you create a playing field by placing the terrain markers provided anywhere on the boards. Two sample layouts are shown, but it's more interesting and fun to design your own town or country highway network.

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(Continued on page 88)

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MARTIN GARDNER



THE BLACK HOLE OF CAL CUTTER

Calvin Cutter, or "Calcutta" as some friends call him, is a collector and maker of paradoxes. I don't mean paradoxes of the sort that can be written down, but physical objects that seem impossible.

When I visited Cal in the spring of 2085, he had moved his fantastic collection into a small building behind his house. One room was filled entirely with topological curiosities. There were large glass models of Klein bottles and projective planes, their outsides continuous with their insides. A huge piece of steel looked like two Möbius bands, one nested inside the other. You could run your fingers around the loop, between the bands, to prove they were separate, yet it was only a single band that looped around twice. Two large wooden rings, each made of a different wood, were linked together. Careful inspection showed that neither ring had been cut in any way.

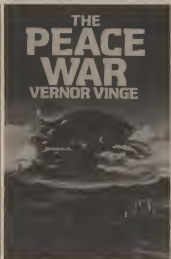
"How in thunder did you construct this?" I asked.

"I usually don't explain," said Cal, "but in your case I'll make an exception. When I was a small boy I cut a notch in a young pine tree growing in the woods near where I lived. I shoved a mahogany torus into the notch. Thirty years later, after the tree had grown around and through the torus, I sawed out a portion of the tree and whittled the second ring. Then I stained and polished the wood. Aren't they beautiful?"

"Our friend Cecil Wyche," I said, "tells me he sent you details about a paradoxical hole he invented, and you actually made one. Is that true?"

"It is indeed," said Cal. "The hole gets smaller and smaller as you go down, tapering off into such a fine filament that I have the hole buried

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in the yard to protect its delicate lower end. Come—I'll show you."

Cutter led me to a spot behind his museum where a protective fence surrounded what looked like an enormous cubical hole. The sides were made of metal and painted black. A sign on the gate read: "The Black Hole of Calcutta."

"Ten years ago it would have been impossible to construct this monstrosity," said Cal. "But as you know, it was in 2076 that the great Chinese physicist No Lim Sum revolutionized quantum mechanics by his discovery that matter consists of an infinite hierarchy of smaller and smaller particles."

I nodded. "Like a nest of Chinese boxes. The sequence never ends. There is no smallest particle."

"Precisely. And it was only a few years later that chemists at the Livermore Laboratory developed techniques for making compounds with subquark particles that could be made as infinitesimal as one pleased."

I must pause at this point to describe Cutter's black hole. It consisted of an infinite sequence of cubical sides that became progressively smaller. Think of the hole (the top portion of which is shown in Figure 1) as made up of cubes without tops or bottoms.

The largest cube was exactly one decameter (about 33 feet) along an edge. Directly beneath were the sides of a cube with an edge of $1/\sqrt{2}$, or close to .7 dm. The third cube was $1/\sqrt{3}$ on the side, or about .57 dm. The side of the fourth cube, $1/\sqrt{4}$, was exactly .5 dm, and so on for an infinity of smaller and smaller cubes. Letting n be the cube's position from the top, each cube had a side of $1/\sqrt{n}$.

We can write the series of edges like this:

$$\frac{1}{\sqrt{1}} + \frac{1}{\sqrt{2}} + \frac{1}{\sqrt{3}} + \frac{1}{\sqrt{4}} + \cdots + \frac{1}{\sqrt{n}}$$

Because the volume of a cube is $1/\sqrt{n} \times 1/\sqrt{n} \times 1/\sqrt{n}$, the series of volumes can be written:

$$\frac{1}{1\sqrt{1}} + \frac{1}{2\sqrt{2}} + \frac{1}{3\sqrt{3}} + \frac{1}{4\sqrt{4}} + \cdots + \frac{1}{n\sqrt{n}}$$

The above sequence, Cal explained, converges. This means that its sum is a finite number. I cannot now recall the exact sum (can a reader tell me?), but it is less than 3 cubic dm.

"It was easy to paint the hole's interior," said Cal. "I just filled the hole with black paint. Of course I had to use a special paint made of infinitely small molecules. Otherwise, a molecule of finite size would have clogged the hole when it became smaller than a molecule. Then I pumped out all the paint, which left the hole painted black, as you see."

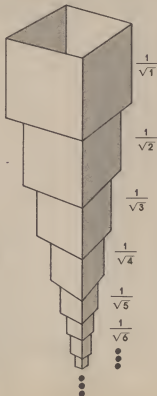
"I can understand all that," I said, "but where's the paradox?"

Cal smiled enigmatically. "The paradox rears its frightening head when you calculate the painted area. Let's go inside and I'll show you the simple mathematics."

Cal was right. When we finished calculating the interior surface area of the hole, it almost blew my mind.

What is this area? Try to determine it before looking at page 46.

Figure 1



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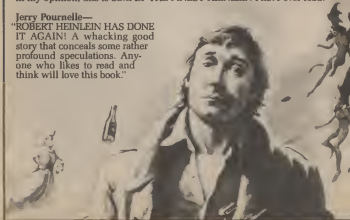
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VIEWPOINT

IMMORTALITY SERUMS

by Tom Rainbow

Dr. Rainbow returns with another of his witty and informative Viewpoints. His last article, "Sentience and the Single Extraterrestrial," appeared in our February issue, and since then he has had a short story published in *Analog*.

art: Val Lakey Lindahn

One of the reasons I read science-fiction is that it gives me some glimpse of what the world will be like after I *die*. As I write this, I'm about to turn *thirty*, the widely agreed transition date between Growth, Vitality, and Vigor, and Senile Brain Plaques, Irregular Bowel Movements, and *Death*. Captain James T. Kirk was supposedly

thirty-four when he commanded the starship *Enterprise* on its original five-year voyage. *Thirty-Four?! Heck, I'm not even an Ensign yet!* I can't even get beyond Level 2 in my arcade's *Star Trek* game! And the injustice of it is that I probably never will. My reflexes are slowing, my self-repair mechanisms are shutting down, and The Grim Reaper is looking over my shoulder when I

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play video games. It is his game that I really play, and like *Star Trek*, or any other video game, it's a game that I can't win. Sooner or later, the Klingons will always get you. The only thing that's uncertain is your score.

So far, my score is pretty crummy. I'm not a Starfleet captain. I'm not a Prince of Amber. There's no building on Fifth Avenue called the Rainbow Tower. I don't even have tenure. However, I'd gladly settle for my present mediocre score, if I could extend my game a little, like *forever*. What I would really like is *immortality*, to arrest my aging at 29, or even 34. Being a science-fiction reader, and sort of a biochemist, an obvious solution would be to create an immortality serum, something like James Blishes' anti-agathics or Larry Niven's Boosterspice. Ideally, this would involve the testicles of a few of these pesky undergraduates that traipse through my lab. "Hey, Doc! Yer gettin' a little paunchy! Heh! Heh! Ya oughta join Nautilus or somethin', heh, heh, heh!" Particularly those undergraduates. Gee, the more I think about it, the more tempting it gets. Could we actually make a serum that would forstall or

reverse the aging process? Failing that, could we create *any* useful commercial product from the testicles of undergraduates? Hood ornaments, perhaps, or some sort of dip . . .

The Cellular Basis of Aging

A straightforward way to create an Immortality Serum is to understand the cellular basis of aging, and then figure out some biochemical way of preventing or reversing it. We grow old, in large part, because our cells grow old. Our bodies are composed of roughly a trillion (10^{12}) cells, each 5–100 microns diameter. Our cells are descended from individual, free-swimming eukaryotes that about a billion years ago clumped together and formed a multi-cellular organism. Think of yourself, for instance, as the great-to-the-nth grandchild of a bunch of incredibly sticky paramacia. Like any other group, such as undergraduates, specializations began to occur among the paramacia, with some becoming the muscles of the organism, others handling the integrative chores, and becoming nerves, and still others tackling the reproductive tasks.

Now, somewhere in the billion-

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"We are . . . elaborate robot bodies for a 4-billion-year-old strand of DNA, with all our actions designed to further its pre-biotic imperative to make more copies of ourselves."

year transition from cute little eukaryotes to noisome undergraduates, a limited lifespan evolved. Paramecia are essentially immortal. Put one in a pond with lots of food and no predators, and it will divide forever, filling the pond with its progeny. The trillion or so modified paramecia that make up your body will only divide a finite number of times. The number of divisions varies with the kind of cell. Brain cells, neurons, don't really divide at all, while intestinal cells replace themselves roughly every 20 days. You may have as many as a thousand different populations of intestinal cells during your lifetime.

Why do cells divide? For intestinal cells, it's to replace cells that die. For both paramecia, and for undergraduate testicular cells, cell division reproduces the organism. Now, why do organisms reproduce? Because roughly 4 billion years ago, when our great-to-the-*n*-th grandparents were strands of nucleic acid, one lucky strand developed the ability to copy itself. By definition, once the first self-reproducing system evolved, it would geometrically increase in number until it dominated the pre-biotic landscape. If a

mutation allowed the system to reproduce faster, or protected it against the dangers of the pre-biotic environment, it would persist. Eventually, this led to such useful modifications as a cell membrane to act as sort of a home for the system, and protein-effector molecules, enzymes, that would give the nucleic acids greater control over their environment. This gave the system super-powers, evolutionarily speaking. It could explore strange new avenues of self-reproduction, becoming multicellular, becoming vertebrates and eventually becoming us.

We are, then, elaborate robot bodies for a 4-billion-year-old strand of DNA, with all of our actions designed to further its pre-biotic imperative to make more copies of itself. Once you realize this, you tend to stop going to church. Now, why is it in the best interest of your DNA to make you grow old and die? Well, strange as it seems, your DNA is *immortal*. It has been copied and re-copied for 4 billion years. You copy it again in another robot body when you have children. Your survival is of interest to it only until you become mature enough to have children. After that, it abandons you. You grow old and die, either because you

are no longer relevant to your DNA's future, so it no longer matters if you lose the ability to repair yourself, or because your DNA perceives you as a threat to its immortality, and takes biochemical steps to slowly kill you. Either way, the price we pay for having Sex is Death. Gee, it wouldn't be so bad if the Sex were better!

Now, do we die because our DNA neglects us, or because we are deliberately murdered? I lean towards murder. For one thing, death is not an inevitable consequence of cellular metabolism. Witness the paramecium that can divide forever. Without highly-developed self-repair mechanisms, a machine as complicated as a paramecium would break down in minutes. The same self-repair mechanisms that allow a paramecium to exist for minutes allow it to exist forever. Thus, it's untenable to think that we die because it's more trouble to maintain our cells for a hundred years than it is to maintain them for a week.

For another, there is the enormous variation in the life-spans of multi-cellular organisms. Mice live for two years, dogs for seven, humans for seventy, and giant sequoias for maybe a

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thousand years. There is no reason to think that the cells of a mouse or a dog are any more or less complicated than our cells, so they should wear out at the same rate. The fact that they don't suggests that they are deliberately killed after a certain amount of time. Also, given that it's possible to make our cells live forever, *a la* the paramecia, it would seem to make good sense to allow us to breed eternally, producing an infinite number of DNA copies. Again, the fact that we don't suggests that we are being purposefully eliminated. A good reason for our deaths might be to insure that we don't compete with our offspring, who might have significant genetic improvements, and thus would have an even better chance to replicate their DNA. Conclusion: We are being *murdered* by a callous, inhumane, 4-billion-year-old piece of DNA, the biggest mass murderer in history, who's slaughtered literally *trillions* of his descendants, and who won't stop until he gets *you and me!* *Police!*

An Immortality Serum

If the motive, so to speak, is to insure that we don't eat our young, then what's the weapon?

There is some evidence that we die because our self-repair mechanisms are deliberately turned-off. Again, without continual repair and renewal, machines as complicated as our cells will quickly break down. Our most important mechanism for self-repair is the maintenance of the information in our DNA. The DNA in our cells contains perhaps 10^{10} bits of information, specifying in exact detail their construction and how they are to function. If this information is garbled, cellular function will probably be impaired. Random scramblings of the DNA of your germ cells are known as *mutations*, and as mentioned, are the driving force of evolution. Usually, they are harmful to the reproductive success of the organism, though occasionally, they enhance it. *Somatic* mutations in the DNA of non-germ cells are likewise rarely beneficial. (See "Superpowers!" in the Sept. '83 *IASfm* for more details about somatic mutations.) An elaborate enzymatic mechanism exists to safeguard your DNA from accumulating noise. Aberrant base-pairs are weeded out, damaged segments are quickly replaced, keeping your genetic information accurate to 1 mistake per billion bits of

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VIEWPOINT

information. Now, what would happen if our repair mechanisms would become mildly impaired, say, producing 10 or 20 mistakes per billion bits? Initially, not very much, but the errors would tend to escalate, with slightly faulty DNA producing faulty proteins. Because some of these proteins will be enzymes that synthesize and repair the DNA, even more noise will be introduced. This will result in even more defective proteins, which will produce yet additional flaws in the DNA, generating further dysfunctional proteins, which make more mistakes in the DNA, until finally you have an *error catastrophe*. This is the term coined by the biochemist Leslie Orgel to describe how senescence could occur by the exponential loss of genetic accuracy. According to this, we grow old because that 4-billion-year-old piece of DNA *garrots* our proof-reader.

Now, what is the evidence for the error-catastrophe theory? Well, as some cells get older, it's clear that they produce defective proteins. The number of these defective proteins increases exponentially as the cells age, consistent with the prediction of the error-catastrophe theory. One of these defective proteins is *DNA*

polymerase, the enzyme that makes DNA from free nucleotides. The loss of accuracy in DNA polymerase activity increases exponentially as cells senesce, again, in accord with the error-catastrophe theory. Another prediction of the error-catastrophe theory might be that cells would age prematurely if errors were introduced artificially into the transcription of genetic information. This also seems to be true, as certain nucleotide analogs and antibiotics, which decrease the accuracy of protein synthesis, cause early senescence of dividing cells. These compounds, then, function as *anti-immortality* serums, and should be put in the Diet Sunkist of any snot-nosed undergraduate who dares to comment on your burgeoning paunch!

Is there any more evidence for the error-catastrophe theory? Well, there are these interesting examples of premature aging in humans, where five-year-old kids or (shudder!) thirty-year-old men will die of old age in a year. The former is known as *progeria*, and one example of the latter is *Werner's Syndrome*. Cells from children or adults afflicted with premature aging show defective DNA repair and defective proteins. Thus, aging of various

sorts seems to be associated with the appearance of increased errors in the read-out of genetic information. Given that aging can be accelerated by drugs that introduce mistakes in protein synthesis, and that the appearance of errors during aging follows an exponential time course, there is good reason to think that error-catastrophe is the cause of normal human aging.

It would clinch the argument, however, if we could show that *preventing* the exponential increase in defective DNA and proteins would *eliminate* human aging. Not only would we provide crucial evidence for an important scientific theory, we would also have created an *immortality serum*. Or an immortality intravenous shot, if the stuff won't survive the digestive tract.

What would be involved in creating something that would prevent the error-catastrophe from occurring? First of all, we have to understand what triggers it. We have assumed that the initiation of the error-catastrophe cascade is a deliberate event in the life of a cell, designed to prevent a multi-cellular organism from competing with its progeny. At a certain point, then, a specific molecular signal is given to the



"Given that it's possible to make our cells live forever, *ala* the paramecia, it would seem to make good sense to allow us to breed eternally, producing an infinite number of DNA copies. The fact that we don't suggests that we are being purposefully eliminated. A good reason for our deaths might be to insure that we don't compete with our offspring, who might have significant genetic improvements, and thus would have an even better chance to replicate their DNA."

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cell to reduce the fidelity of DNA and protein synthesis, leading inevitably to the error-catastrophe. Gee, you think, all we have to do is *stop* this molecular change, and we live forever, guaranteeing that we'll be able to see all nine movies of the *Star Wars* saga, and that someday we'll be able to sell many of our *undergraduates* to the Interstellar Slavers in return for exotic flavors of ice cream and holographic comic books!

It's not that easy. We first have to *find* this molecular signal. It is probably related to a change in the synthesis of a specific cellular protein at a particular time in the cell's life. There are *lots* of proteins in your cells. A typical mammalian cell might have as many as $2-5 \times 10^4$ different proteins. We may know the functions of perhaps 10 percent of these proteins, none of which so far appears to be connected with the onset of aging. Even worse, the techniques don't really exist for relating them to the error-catastrophe signal. Ideally, we would like to look at *all* the proteins in a cell to see which change prior to the beginning of senescence. Any suspicious behavior on the part of a single protein may mean that it's the saboteur that triggers the error-

catastrophe. However, with present technology, we can simultaneously examine no more than 2000 proteins, less than 10 percent of the cell's total. Simultaneous measurement of possible protein changes during aging has not been done, to my knowledge, so it's possible that we would get lucky and find our terrorist protein among the 10 percent we can detect. What we really need are better techniques for studying cell proteins. When these will be developed is anyone's guess—maybe 10–20 years. Maybe never if the government decides to reduce its support of basic research. However, being optimistic to the point of brain-damage, I have no doubt that we will be able to identify the specific molecular changes that trigger aging, develop a pharmacological way of inhibiting these changes, and thus create a real, true immortality serum.

By this point, however, a lot of us will be *old*. It may take anywhere from 10 to 50 years to do this. I know how I do experiments—I'm *slow*. If I go too fast, I *drop* things. If you break too many vials of exotic brain chemicals that cost \$1000 apiece, pretty soon you're out of money, and you have to finance your lab

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with bake sales. Would there be any way of *reversing* the degenerative changes of aging, in case the immortality serum arrives when some of us are in our early nineties?

Well, maybe. Part of the charm of the error-catastrophe is that once it's begun, it's very hard to stop, let alone reverse. You would need to replace the defective DNA that codes for the enzymes involved in DNA repair.

Otherwise, the exponential cascade to the error-catastrophe will continue. Depending on how old you were, and thus how many errors had accumulated in your DNA, a souped-up repair mechanism might even be sufficient to reverse the damage to your other genes. This would be necessary in order for you to grow younger. You could imagine swallowing an artificial virus that would incorporate into your cells fresh new genes for the DNA repair enzymes. Inserting genes into eukaryotic cells is already being done. We currently have only a limited understanding of the specific molecules involved in the DNA repair mechanism, but eventually, given constant funding, we'll know *everything* about these silly little molecules. This again might take anywhere from 20–50 years. So, at the same

time that the drug companies will be reaping huge profits from the immortality serum, a youth serum should be available for all us sagging old geezers.

Stop-Gap Measures

What if the unthinkable would happen, and I was *wrong* about the earliest we could expect an immortality serum. Maybe it would take 100–200 years instead of 20–50 years. Well, one thing we could do is shop for our *tombstones*, and put the deposit on our *burial plots*. Another approach might be to rely on standard science-fiction means of life-extension, to get us to that happy day when we can pay some future drug company the equivalent of the GNP of many third world countries to obtain Eternal Youth. One such method is *suspended animation*, as exemplified by literally zillions of science-fiction stories. Usually, this is done by freezing your body at cryogenic temperatures, stopping the aging process in the same mundane way that freezing stops hamburger from rotting. The traditional problem with suspended animation is in thawing you out. Water expands when it freezes: that's why ice floats. Thus, when the water in

your cells turns to ice, it cracks your cell membranes and kills your cells. There are ways to mitigate this—cryoprotective agents that replace some or all of your cell water with organic solvents that don't expand when they freeze. Even so, at best, you can expect to lose 80–90 percent of your cells when you freeze your body. Maybe that remaining 10 percent can be regenerated, though for organs like the brain, where cells don't regenerate, repairing freeze-damage will essentially mean constructing a new brain. You might even have to do something drastic like transfer your consciousness from your useless freeze-damaged body to a cloned version of your old body, constructed from DNA from your frozen cells and imbued with engrams from your old brain (See "The Feasibility of Mind-Transfer" in the June '83 *IASfm*). Of course, if you do this with your old, error-ridden DNA, you may get your Old Geezer body back, but presumably by then they'll have youth serums.

Obviously, bringing you back from cryonic suspension will be extremely expensive, so you had better have written 10 or so best-selling science-fiction books, or maybe just one of those books with a title like *30 Days to*

Better-Smelling Feet, before you even *think* about doing it. If you are serious about making yourself into what Larry Niven has termed a "corpsicle," I would recommend that you freeze only your brain, and a small number of your intestinal epithelial cells that can be used to clone a new body. It is much easier to cryoprotect small quantities of tissue than it is a whole body. Human semen can be stored indefinitely in liquid nitrogen with only moderate loss of viability. Ideally, you would store only the "sentient circuit" of your brain, the part that is necessary to reconstruct your self-awareness and personality (elaborated in loving detail in "The Feasibility of Mind-Transfer"). You would also want to mount a picture of yourself on the cryonic capsule with your tissue to facilitate the cloning-reconstruction procedure. I plan to tape a picture of Tom Selleck to the outside of mine.

Another science-fictional technique of life-extension is *organ transplantation*. In Larry Niven's Known Space Universe, the slightest infraction could result in you being sent to the Organ Banks, where a rapidly aging populace would eagerly tear out and re-cycle your internal organs. The concept of

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the Organ Banks was predicated on the assumption that some biochemical means would be developed to prevent tissue rejection. Surprisingly, such a thing may be at hand. The fungal drug, Cyclosporin, is a relatively selective inhibitor of the components of the immune system that mediate tissue rejection. The use of Cyclosporin has raised the one-year survival rate for heart transplants performed at Stanford University from 50 percent to 80 percent. This increase in survival is significant enough that Blue Cross will now pay for heart transplants at Stanford, regarding the operation as a therapy, and not an experimental procedure.

Given the success with Cyclosporin, it is easy to imagine that improved versions of this drug will totally eliminate the problem of tissue rejection, making the Nivenesque Organ Banks feasible. This could go a long way towards keeping us alive until true immortality is available.

Does the probable elimination of tissue rejection mean that we will sink into Niven's vision of society, where the death penalty is applied to such things as jaywalking and failure to pay

your taxes on time in order to provide organs for transplantation? Well, it is true that the demand will always exceed the supply. It's estimated that there are only 20,000 potential donors per year in the USA, a drop in the bucket, when you consider that almost all deaths by natural causes could be deferred to some extent by transplanted organs. Add to this the organs from an additional thousand or so people on Death Row, and you only marginally increase the supply. The problem with providing additional organs by making more crimes punishable by death is that it probably violates the Constitutional prohibition against cruel and unusual punishment. A Constitutional amendment would be needed to change this. You might even have to convene a new Constitutional Convention, and re-write the whole bloody Bill of Rights. It is not inconceivable that a rapidly aging populace would want to do this, but by the time this happens, sufficient progress in artificial organs might have occurred to take the impetus out of re-writing the Constitution.

A related Niven concept is *organlegging*, killing innocent people to provide material for a

black-market Organ Bank. Strangely, I think this is slightly more probable than enforcing the death penalty for jaywalking, given that it can be done by private enterprise. Let's say that you need a liver transplant. The local organ bank is low on livers, and, consequently, you may have to *die*. This is somewhat undesirable to you, so you pay a huge fee to your neighborhood Organized Crime representative to have some arbitrary 19-year-old mugged and killed within easy reach of the Organ Bank. Consequently, the Organ Bank gets a new liver, and you won't die from chronic hepatic failure. Who's going to know that you did it? People are killed in muggings all the time. And what is the Organ Bank going to do? *Not* use the material because the donor was murdered? Again, people are murdered *all* the time. The scenario of Niven's, where the material from the murder victim ends up in a black-market Organ Bank, is not quite as probable. For one thing, it requires that highly trained transplant surgeons would be willing to participate, and to risk winding up in the Organ Banks themselves. No matter how much money would be involved, I would think it would be difficult to

entice transplant surgeons to do *anything* illegal, because they already earn *incredible* salaries—even higher than famous science-fiction writers. Maybe you could get a medical student to do it, but he'd probably put your lungs in backwards.

Social Consequences of Immortality

Well, obviously, if we all live forever, the birth rate is going to have to get a *lot* lower. How low depends on how many people we want on Earth. Let us say that the current population of the Earth is 5 billion, the birth rate has dropped to the replacement level, and samples of the immortality serum have been sent via third-class mail to all of us, just like you sometimes get those little bottles of shampoo. In roughly 20 years, the population of the Earth has doubled. Twenty years after that, your two kids have had their two kids, and the population has increased by an additional 5 billion. After a century, we now have 30 billion people on Earth.

We only get a population of 30 billion if there are no deaths. We can assume that even with immortality, deaths will occur by accident or violence. Perhaps

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even some of us would be *allergic* to the immortality serum, and have to die of old age. Let us assume that there is a 0.1 percent chance of dying from accidents and related causes. This means that on the average, 1 person out of a thousand will die. For every billion people, we lose a million. So, at the end of a hundred years, we have 2.975×10^{10} billion people instead of 3.000×10^{10} billion people. *Big Deal.* You can see from this that the only way that we're going to reduce population growth is by cutting the birth rate. Let's say we allow only one child per couple. Then the population will increase by 2.5 billion people in twenty years, 1.25 billion people after forty years, 625 million people after sixty years, giving us roughly a total population of 10 billion people by the twenty-second century. Interestingly, if we assume a 0.1 percent death rate, then the population stabilizes at roughly 10 billion people after about 120–140 years.

So, given a 0.1 percent death rate and a one-child-per-couple birth rate, the population of the Earth will roughly double after the introduction of the immortality serum, and will more or less reach equilibrium at this level. This seems like a tolerable

increase, particularly if all the new people are shipped to North Dakota or to some big desert in Australia. The main problem will be that we will become a planet of *ego-central, obnoxious only-children*, always wanting to be first to board the Bussard Ramjet, first to use the Time Tunnel, never sharing, etc. Consider what might happen if humanity were invited to join the Galactic Federation. The Rigelians hosts for the Federation prepare a sumptuous banquet in our honor, and they serve Earth's ambassador the first course, a baked semi-boneless *trirspix*, the larval-form of the Rigelians. *WHAA!*, our only-child ambassador screams, *I CAN'T EAT THIS!! I WANNA CHEESEBURGER!!* Mortally offended, the Rigelians pass a motion declaring us to be non-sentient food-animals. We are promptly killed and eaten. [Note: the editor of this magazine, being an only child herself, refuses to acknowledge the preceding statement. So there!]

Maybe growing up in that big Australian desert will build character. Maybe some drug company will develop a character serum. Another problem with lowering the birth rate is that we may eliminate most of the

innovation in our society. A large proportion of all of the new ideas come from people under the age of thirty. Newton was in his twenties when he developed mechanics. Einstein was in his twenties when he developed Relativity, and according to his autobiography, actually began to formulate it when he was sixteen. Darwin didn't publish the *Origin of the Species* until he was forty, but again, according to his autobiography, he developed the concept of Natural Selection while in his twenties. The list is endless. It may be that genius-level creativity declines with age because our neurons start the error-catastrophe cascade and become decrepit. In which case, the immortality serum will keep us bubbling with ideas. However, it may that new ideas are closely linked to seeing or learning things for the first time. Immortality, and the unavoidable restrictions on the birth rate, would therefore cause real problems because the number of twenty-year-olds will decline exponentially over the next hundred years.

But let's look at the bright side! We may be surrounded by a bunch of spoiled-rotten, uncreative, only-children, but there will be no more

undergraduates!!! Zero! Zilch! The Empty Set! What few we need to make up for the 0.1 percent death rate we can put in the Zoo of Earth, right next to the aardvarks! Have you ever noticed the similarity between an undergraduate and an aardvark? In fact, they have been known to produce fertile offspring. The only difference is that aardvarks have better table-manners and they don't smell as bad. Also, very few of them are pre-med. As George Bernard Shaw said, Youth is wasted on the Young. As I once said, feed an undergraduate lots of ants, show him naked pictures of aardvarks, and you'll have a friend for life. Which for those of us over thirty is passing at Warp Factor Eight. ●

References

The original statement of the error-catastrophe theory of aging can be found in Leslie Orgel's article in Proceedings of the National Academy of Sciences, USA, vol. 49, p. 517, 1963. A good review of all the evidence that supports it is the article by R. Holliday and T.B.L. Kirkwood in Journal of Theoretical Biology vol. 93, p. 627, 1981. To learn more about molecular biology, read the text, Molecular Biology of the Gene, by J.D. Watson. Facts about Cyclosporin can be found in the article by Gina Kolata in Science vol. 221 p. 40, 1983. Also, read all of my previous articles for IASFM, and tell Shawna to increase my word-rate. If I can't be immortal, I at least want to buy a Porsche.

SOLUTION TO THE BLACK HOLE OF CAL CUTTER

Let's consider only a single face of each cube. The area of a face is the square of its edge, so the sequence of faces are:

$$\begin{array}{cccccccc} 1 & 1 & 1 & 1 & & 1 & & \\ - & + & - & + & - & + & \cdots & + & - \\ 1 & 2 & 3 & 4 & & & & n \end{array}$$

Do you recognize this series? It is none other than the famous "harmonic series" that was the basis of a puzzle about bouncing superballs in this column for April 1983. As is well known, the harmonic series *diverges*! This means that its partial sums increase without limit. The further you extend the series, the smaller each term becomes—in fact, a term can be made as small as you please—nevertheless the sum slowly increases without an upper bound. There *is* no limit sum. The total area of Cutter's black hole is infinite!

There are many notorious examples in solid geometry of shapes with a finite volume and infinite surface area, but Cal's hole is one of the easiest to understand. Of course such a hole could not be painted inside with ordinary paint. You have to use an ideal paint of infinite thinness. After all, you are painting an infinitely thin surface.

What about the hole's depth? It, too, is infinite. How then could it have been constructed without allowing it to extend downward until it passed entirely through the earth? The answer is simple. After reaching a reasonable depth, Cal coiled the hole into a spiral.

Speaking of black holes, I learned recently from Dennis Howard, who runs a science fiction bookstore in Asheville, NC, a startling fact. The term "black hole" was actually used by Edward Elmer ("Doc") Smith, the "father of space opera," in a novel he wrote several decades before physicist John Wheeler coined the term!

As all SF fans should know, Smith was a pioneer in writing pulp novels about spaceships that zoom around the universe, faster than light, carrying simple-minded men and beautiful women, all talking in the awful American slang of the early twentieth century. Smith's first space opera, *The Skylark of Space*, was written before 1920, but not published (in *Amazing Stories*) until 1928. In Chapter 12 the fiendish Marc DuQuesne has abducted Dorothy Vaneman, the hero's girl friend. His spaceship is struggling to escape the intense gravity field of what Smith calls a "dead star."

If you own a copy of this old pot boiler, see if you can locate the passage in Chapter 12 where the term "black holes" appears. If you can't find it, I've quoted it on page 67.



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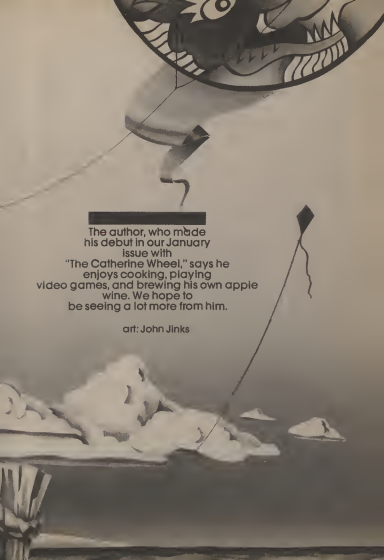
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by Ian McDonald

CHRISTIAN





The author, who made
his debut in our January
issue with

"The Catherine Wheel," says he
enjoys cooking, playing
video games, and brewing his own apple
wine. We hope to
be seeing a lot more from him.

art: John Jinks

When the day is so hot that it scorches the tips of the sea-grass into tight brown spirals and sends the columns of ants stigger-staggering across the sand, the beach is a good place for a boy to play. He can splash through the waves as they wash on the shore. He can build castles and fortifications in the sand and watch the sea flood his moats and crumble his ramparts and capture his standard, a single gull's feather stuck into the topmost battlement. He can set a driftwood dreadnaught afloat and bombard it into submission with stones from his shore batteries, or he can write his name with a stick in the damp sand and let the tide wipe his words away. There are a thousand different games a boy can play with the sea.

If the tide is low there are the hulks, tired gray men of the sea that have been slumping into the sand for centuries. Some have settled so deeply that only the points of their ribs protrude from the swallowing sand, and a boy can imagine that they are not the bones of ships at all, but the bones of prehistoric creatures.

But if the tide is high there is always the cannery. It lies half an hour's walk down the beach, but worth the effort, for it is made in heaven for a small boy. There are rusting steam cranes and disused canning machinery, there are chutes and slides and sluices, there are rails and dollies and hoists, but most of all there are the buildings, made from planks of that gray-brown wood that always feels warm to the touch, so old that they have begun to bulge at the sides. All the windows are broken and the doors off their hinges and light shines through the roof where the autumn gales have swept the shingles away. Parents do not trust it. They say the pier is unsafe and forbid children to play on it, but their restrictions take nothing from the magic of the place, a magic of a different kind from that of the hulks (for after all this pier has never sailed beyond the rim of the world), but no less magical for that. For above all other places, this is a boy's place.

Your place.

When the day is so hot that it drives the customers indoors and Ma wants you to run errands and Da wants you to collect glasses and sister is too busy serving and brother too busy practicing the mandocello, when not even Mr. Cat has time for you, the cannery is a good place to be.

Ma's shout chases you along the beach but you easily outrun it and soon all there is to hear is the rush of surf and the mewling of the gulls slipping down the wind. The sun is bright and the sand is hot and you think that on a day like this anything could happen. So you search the sky for the tell-tale flickers of daylight shooting stars that you have been told are the trails of ships arriving at the edge of the world. You squint through your fingers, for the sun is very bright, but though you peer and peer you do not see even one.

But you do see three colorful shapes dancing high on the air. A moment's concentration reveals them: kites, one like a festival dragon with a long tail, one with a great smiling sun painted on it, and the third one,

so high up that it is barely visible, no more than a dead black speck. Someone is flying kites from the end of Cannery Pier.

There is a gaily painted caravan with a skewbald pony munching the tough sea-grass in the dunes by the foot of the pier. The caravan door is open and you decide to sneak a quick look. Why not? After all, isn't the kite flyer trespassing on the end of your pier?

The caravan is filled with kites. There are no pots, no pans, no sink and no stove, no bed or books or bootlocker, just kites of all shapes and sizes and colors. There is one with a painted moon, and another with a cross of stars that actually twinkle, and a blue kite with clouds on it, and one with a whirlwind and criss-crossing lightning bolts, and another blue one, but with a painted rainbow, and one so black that your eyes skid off it like glass, and many many more, too many to take in with one single glance so that all you get is an impression of lightness and brightness and color.

You are so taken up with gazing that you do not hear the creak of the step or the tired sigh or feel the cool of a shadow falling across your back.

"Oh," says a voice. You turn, seized up with dread. The tall, gray man before you takes a step back in surprise. "Oh," he says again, at a loss for something better. It is hard to tell who is more surprised. You stand and stare open-mouthed at each other for a long and silly time. Then the gray man frowns and says, "But what are you doing in my caravan?" At any other time you would have wilted with embarrassment, but the shock of discovery has made you defiant.

"What are you doing on my pier?"

The gray man gapes. A look of puzzlement crosses his face.

"I'm sorry, I was unaware that the pier belonged to anyone. It seemed to me just to be a good windy place well away from all the people where I could fly my kites in peace."

And because he has not laughed at you like any other adult would, you decide to trade this kiteman trespass for trespass.

"I don't actually own the cannery, nobody does, but it's my special place. But because you think it's special too, you can fly your kites there any time."

"Thank you," the kiteman says graciously.

"I came in here to look at your kites," you continue. "I saw them through the back door and came on in, because if you don't want people to go into your caravan, you shouldn't leave your back door open."

"True," the kiteman says. "Can't deny that. Well, having seen them then, what do you think of my kites? Aren't they grand?"

What you think is that it is silly for a grown man to be playing with kites, but you keep your opinion to yourself.

"Aye, grand," you agree, but it is as if this gray kiteman can see right inside you, because he smiles and says,

"Ah, you're only saying that to keep a stranger happy. I can see that you know little of their true charms and mysteries. But you have the

look of a boy with too much holiday time heavy on his hands, perhaps I might instruct you a little in the appreciation of kites? How would that sound? In return for the use of your cannery?"

"Sounds fine, mister."

"Call me Christian," the kiteman says.

"Fraser MacHenry," you reply, remembering your manners.

"Glad to make your acquaintance, Fraser," the kiteman says and he goes and picks up a great kite almost as gray as himself. On the kite is a painted cherub blowing a gale from apple-round cheeks and at its lowest point an ocean wave is breaking.

"What would you want with such a dull thing on a bright afternoon like this?" you ask.

"Because I think it's time we had a squall," Christian says, and, tucking the stormkite under his arm, off he sets; past the skewbald pony, who gives you a terrible look, up the dunes and across the tussocky grass to Cannery Pier where the three kites strain on the wind. A thought strikes you.

"Who's flying the kites if you're not there?" you ask, ready to feel betrayed.

"Oh, never worry Fraser, I have this little black box I adapted from a ship's sheet monitor I picked up in the market in Corpus Christi. Clever little thing, but cost me a fair penny, as clever little things always do; it senses the shifting of the kites on the breeze and winds or releases line accordingly."

At the end of the pier lie the kiteman's few possessions: a crumpled coat of blue pilot cloth lying across a tall wooden staff with silver caps and the little black box clamped to an iron bollard. The kiteman sits himself down. He motions for you to join him and you come and sit down beside him and dangle your legs beside his over the glinting water. He nods at his kites.

"Well, which one would you like a go at?"

You squint into the painfully bright sky and pass your critical eye over the hovering kites. The sun one is pretty, the dragon exciting, but neither so exciting as the black one, which must be the twin of the one you saw in the caravan.

"The black one please."

Christian shakes his head. "Sorry. Try again. You see, though I may be able, I hope, to teach you how to fly a kite forwards and backwards, and up and down, and side to side, that black one has to be flown *inwards* and *outwards* too, and to be honest, I don't think I can teach you that."

"*Inwards* and *outwards*? How do you fly a kite *inwards* and *outwards*?"

"Good question, Fraser. Wish I knew. But tell me, have you heard of people who can do something without being certain of how they do it? Well, I must be a bit like that with that kite. Now, which of the other two would you like, or would you prefer this one?" He holds out the gray stormkite, but you shake your head and say,

"The dragon kite please."

"The dragon kite it is then," says Christian and unhooks the flying line from the little black machine and hauls down the big dragon kite. Close to, it is bigger than you had ever imagined. Then he shows you how cleverly it is constructed, how it generates lift from its geometry, how light and how delicate it is and yet how strong. He shows you how to fix the flying line to the bridle line, how to launch it and control it so that it holds steady in the windstream, not dipping and bellying like the rowdy gulls. Then he reels it in once more and hands kite and spool over to you.

You botch the first two attempts and your ears burn with horrible embarrassment. But again Christian does not laugh at you. "There's always time enough to do it well," he says, and on your third try the great sky-dragon skips and jumps and hiccups along the pier but then the wind catches it and whips it into the air so strongly that the line sings off the spindle in your hands. You cheer as your kite climbs high, high past the startled delinquent gulls, high over dirty Cannery Pier, and the bright dragon's eye looks down to see the small dancing speck on the end of its line that is you and the larger gray spot that is Christian. He grins and unlashes the sunkite from the little black machine and together the sun and dragon tumble through the sky. Presently they are joined in their game by the gray stormkite, but within the hour you must hand the dragon kite back to Christian because the wind has grown too wild for you to master. A horizon-wide line of evil black cloud is advancing on the cannery and gusts are tugging at your ears. Christian casts an eye on the sky and says,

"Go on, get out of here before it starts."

"Will you be here tomorrow?" you ask.

"Oh, I should think so. Look for me under . . . a blue kite, I think." And with that the first knuckles of rain rap on the shingles and chase you all the way up the beach to home. Da is bent over the wireless listening to the Coastguard weather forecast and shaking his head.

Towards midnight the squall clears sufficiently for the storm-shutters to be lifted and the refugee customers ushered gently home. For you, unable to sleep on account of all the wonders buzzing round in your head, this is a chance to unhook Da's binoculars from their peg and sneak up to the weather-room. Despite the lateness of the hour it is still light, for this time of the year the sun never really sets, and by the gloaming you can clearly distinguish the caravan sheltered in the dunes, even the skewbald pony chewing contentedly at its thistles, and there at the end of the pier, is that Christian himself? You fumble the magnification up five and now you are certain, it is Christian, his coat of blue pilot-cloth pulled on against the chill, and above him, his kites; one dead black, sprinkled with stars, the other a bold white half-moon riding up the sky. Far away around the edge of the world the real moon is rising to meet it, and on the face of the white moon is a sharp black spot: the black kite.

You return the binoculars to their case and are about to tiptoe back across the treacherous floorboards when something goes click! in your head, something you saw today, a wooden staff with silver heels. Close concentration reveals forgotten details: the notches on the staff, little nickmarks all the way down its length to within six inches of its foot. Memory clarifies: one of Da's hand-me-down sailing stories, that there's a mark on his staff for every passage of Cape Infinity a pilot makes. Reason concludes: the man flying kites from Cannery Pier can be nothing other than a pilot.

And now it is another hot, irritable day and you are getting underfoot even if you're just sitting playing with Mr. Cat on the window ledge. Ma throws a packed lunch at you and chases you out of the house, forbidden to return before tea. So away down the beach you go, secretly glad because there are a hundred questions you want to ask, each of which breeds a thousand more and the answer to even one of them would be worth ten of Da's stupid old sailor-stories. Your head rings with echoes of pilots and sailships, black suns and light-speed horizons, sudden squalls and staffs and kites that fly inwards and outwards; half-understood fragments of overheard stories or lessons from school that have all solidified in the presence of a real pilot flying his kites from the end of your pier. And as sure as eggs are eggs, there is the blue kite flying proudly in the clear morning air, so blue that it makes the sky seem pale in comparison.

As the tide is out you have planned to take Christian for a walk out to the hulks. Maybe they will prompt him to answer some of your nervous questions. Christian is only too pleased to fasten his kites, the blue, the black, and the bright yellow sun, to his little black box and follow you down the weedy-wet steps onto the sand.

"A fine morning for a walk," he declares and comes with you out over the sand ripples and through the shallow drift-locked lagoons to the damp place where the hulks lie. Behind you two lines of wet footprints meander over the glistening sand. Seagulls bicker above you and all around stand the tired old bones of the hulks. You squeeze puddingy sand between your toes and point to a barnacle-crustcd cylinder of rusting plate about a mile off, slightly less decrepit than its two companions.

"My Da says when he was a wee boy he can remember that one coming down." Christian screws up his eyes against the glare and peers.

"He's not the only one," he says. Now what could that mean? Subtlety breeds subtlety, it seems. Time for a more direct approach.

"You were a pilot once, weren't you Christian?"

"Oh, you must have seen my staff yesterday. I left it on the pier, I remember. Well, yes, I am a pilot, and let me see; yes, I am hundreds of worldbound years old, yes, I was conning ships around Cape Infinity when your grandfather's grandfather was your age, and no; I am not immortal, for not even a pilot can cheat God, but perhaps I am a little less mortal than I once was, though my starfaring days are done. And that's your first question answered, Fraser."

Now it's your turn to gape.

"But how did you know that?"

"Foresight, Fraser, but it doesn't take foresight to tell me that you'd like to know every little thing I had to learn to be a pilot. And I'd tell you that if I started now to tell you all that I learned I might be finished by St. Agnes's Eve 1816 because it takes ten years for a man to learn the pilot's art, and only then if he's the right man. For without the gift of foresight you might as well try teaching a handful of sand from this beach. Instead I think I'll tell you a story, and it's a story in three parts and this is the first part of it."

THE STORY OF THE BOY WHO WANTED TO BE HAPPY

In the narrow lands that lie between the mountains and the sea there stood a city of warm red brick. In the winter the snow lay deep in its streets and in spring and autumn the sea-fog would hang for weeks over it like wet, gray wool, but in the summer the red brick buildings would sigh and stretch and release a gentle friendly warmth into the air.

Now, this city had but one Law, and it was the wisest Law ever made, for it held that nothing was higher than happiness. To this end, every child who reached the age of twelve (for the years of that city are longer than yours, Fraser) was tested so that they might find the station in life which afforded them the greatest happiness. For everyone was happy in that city, from the street-sweeper with his besom to the High Portreeve with his gold chain of office, for everyone was in the position to which he was best suited, and everyone who married, married someone who had been tested to be their perfect match in temperament and character, and there was no envy or greed or jealousy of another, for everyone was content. Tears were never seen in the streets of that city, nor the sounds of sorrow ever heard, for sadness and sorrow had been abolished.

Now, in this city lived a boy. In many ways he was like you, Fraser, for he loved to watch the steam-tugs laboring up the Musgrave Channel to Templemore Dock with laden transports wallowing in tow, or sometimes he might play hooky and cycle out along the pier to the Mole House with borrowed binoculars to wait for hours for the tremendous fountain of sunlit water that heralded the arrival of a ship in the bay. But though he loved the ships, as all boys can before life grinds the love out of them, there was something he loved better. For he was clever with his hands and had a quick and playful mind, and what he wanted most in the world to be was a toymaker. He wanted to make little painted wooden farm animals, and clever, intricate puppets, and toy trains with real steam locomotives, and baby dolls so lifelike that you would hesitate to hug them for fear they might cry: this he knew would make him truly happy.

At the age of twelve he went to be tested, as everyone must if they wished to remain a citizen of that city. He filled the forms and completed the aptitude tests and submitted to the medical and psychological ex-

aminations and in the middle of his gene-scan chart they saw a great peak in the graph and they knew then that he was that most singular of men, one possessed of the gift of foresight, who could see into a wider present than they did, one that went a little bit outward and a little bit inward into time.

So they summoned him to the Bureau of Happiness and told him that with such a gift he could never be truly happy as a toymaker, that he must go to Trinity House and learn the Pilot's Art, for such a great gift must be used for the good of the people of all the worlds and not buried forever in some dingy toymaker's workshop. Finally convinced that he could not be happy any other way, the boy let them put him on an Admiralty ship called the "Edmund Foxx," and the ship spread her sails to catch the winds between the worlds and sailed away from the city where happiness was law and the boy never returned there again.

And though many worldbound years passed, it only seemed a few days to the boy until he found himself treading the ancient halls of Trinity House. There they taught him to use his foresight to sense the possible futures that radiate away from the pivot-pin of *present* like the ribs of a fan, and the possible pasts that likewise converge upon it. They taught him to feel the tides on his skin, and the currents that flow under space and time. They taught him ship-craft in thrilling races round the sun in solos which were little more than a sail and a life-pod. They taught him the mysteries that lie at the unseen hearts of black suns and how they might be twisted to permit a ship to pass safely through to another place and time. And when they had taught him all they knew they sent him out to sail the 19 Worlds under the staff of Navigator-Meister Koch to learn those things which cannot be taught. And at the end of all this, he was a boy no longer but a man, and a man but briefly, for when he took up the silver-shod staff and badge of Trinity House he became a Pilot. But do you know Fraser, in all those years they never once thought to ask him if he was happy. For in the consideration of what is highest, happiness always bows to the law, and the law to expediency.

And that is first part of Christian's story.

"But how do you fly a kite inwards and outwards?"

It is a gusty, roary sort of day. Overweight white clouds with dirty gray bottoms hurry across the sky. Too blustery for the sunkite, reckons Christian, so he has only the black kite, which no weather seems to worry, and a blue kite speckled with scuds of painted cloud, up flying this morning. Christian considers your question.

"Hard to explain, maybe easier to show. Try touching your fingers gently to the flying line, there . . . now, what do you feel?"

You brush the line with your fingers. An odd sensation hums through them.

"It tingles," you whisper.

"But not unpleasantly?" You nod your head. "That's good. Now, close

your fist on the line and pull it as hard as you like. Go ahead, pull, and don't forget to watch the kite." Puzzled, you keep one eye on the sky and tug the line firmly. Nothing happens. The line twangs from your fingers.

"Try again, harder, as hard as you can." You seize the line and heave for all your worth. It does not move one inch. It is like trying to pull an iron piling out of the school fence. Up there the black kite does not even waver.

"What's happening? Why won't it move?"

"Well, you see, most kites fly in the three dimensions that we're familiar with in our world, but some kites fly in four or even five dimensions and go a little bit outward and a little bit inward into time. So unless you can hold the flying line in those additional dimensions, the kite's not going to budge in these three. Then of course, the nature of the wind has a lot to do with it. Now, my weatherkites, they fly on the worldwind and respond to the world's weather, but the black kite (which is made from special sensitive sail-fabric I buy from a man in Corpus Christi, and is as much a creature of the flyer's mood and whim as the wind's), it flies on the higher starwinds and responds not to the bright sun, but to the dark sun out there at the edge of our system of worlds."

"But what would you want a kite like that for?"

"Many reasons, Fraser, but chiefly so that I know when anything arrives or departs from our universe at Cape Infinity. You remember that tingle you felt?" It had felt like a distant shout sounds when you cannot make out what the words are like, something you can never fully know. "Well, that's a foresight impression drawn down from the sky. In a way, it's sort of like . . ."

"The aerial on my Da's wireless!" you shout as things become clear.

"Well put. You see, over the years I've been waiting, my foresight has grown weak. Oh, I can still foresee big, obvious things, like the weather, or the first question that comes into your head, but I've lost the subtlety for the small things, like when a particular ship comes through Cape Infinity, or even when a small boy decides to have a look around my caravan. People muddy the timestream and cloud my foresight, they're always deciding, or not deciding, and from each decision, or lack of it, a whole new universe springs into being. You understand?"

"I think so. . . . So you need something to make the wee things louder," you say, thinking of Miss Latimer's ear-trumpet from school. "And there're no people here to bother you. Except me."

Christian laughs, a wonderful sound like ripples chuckling on the shore.

"Oh, you're no bother, Fraser. You do me a power of good, because it's a man's duty to reflect upon his past in his retirement, and you remind me of that duty. Apart from that, I like having you here to talk to."

Something Christian said prompts a question.

"Did you say you were waiting for your kite to tell you when a special ship came?"

"I suppose I did, in so many words. Mind you, she'd hardly qualify as a 'ship' any more, though she'll be under sail and airtight. 'Hulk' might be a truer description, but she's nothing like those poor old rusting things out there in the sand. She's a *true* ship, what you people call a 'sail module.' And she'll come down like a true ship, in a blaze of fire and glory, because like all sail modules she's too lightly built to survive entry into the atmosphere though she's laughed at Cape Infinity.

"Tell me, Fraser, have you ever seen meteors burn across the sky out of their proper season and wondered to yourself how they came to be there? You see, they might not be meteors at all, but the hulk of a sailship burning away to nothing up there on the edge of the world. Despite our machines and our harnessing of foresight so that we can reach out over the lightspeed horizon and into possible danger, travel between the worlds is still a perilous business. For although we created Cape Infinity, it is beyond our control and always will be, for in it we've finally made something which is our master."

And with that he will not say another word about ships or suns or black kites, but sits there gazing at the distant hulks with a look on his face that is a curious mixture of recognition and grief.

Your stomach reminds you that you have spent all morning talking and you are eager to unwrap your lunch. As usual Christian has forgotten to bring any, so you offer him a share of your cockle pie and pickled onions.

"Oh, no, thank you Fraser, I'm not all that hungry. . . . I don't seem to have the appetite I used to."

The fact is, he doesn't seem to have an appetite at all because you have never seen him eat. And he mustn't need as much sleep as he used to either, because some mornings you have seen him sitting there at one or two or even three o'clock, just sitting there as still and solid as that iron bollard beside you.

"Christian, why do you tell me all these things?"

Christian smiles. "Who can really say why we do one thing rather than another? But: enough talking, for the wind's up and the sun's bright and the day's just perfect for flying a kite."

THE STORY OF THE PILOT AND HIS PUPIL

This is a love story and like all love stories there is more pain and cruelty in it than love.

Now, there are two types of men who sail between the worlds. There are those who love to adventure in uncharted skies and feel the long wind in their sails, and there are those who love to specialize in one part of space until they know the weave of its fabric like they know their own skin. The pilot was one of the latter. For more worldbound years than you would guess, Fraser, he had coned sailships through the singularity until it was said that he knew Cape Infinity better than he knew his

own doorstep. And there was many a word of truth in that, for he was the kind of man who lived two months out of twenty years in his little house on Water Street, who was only truly happy with a ship's deck under his feet and had as many marks on his staff as a man of three times his subjective years. He remained changeless while the people he passed in the streets of the city grew older and they muttered to themselves that no one could cheat God and not reap the reward some day.

Now, about this time the admiralty commissioned a ship for a seeding run to the then uninhabitable New South Georgia Colony. Never a popular business, this planetary seeding; you'd think that in return for a whole new world the admiralty would be a little more generous with their bonuses than they are. The name of this ship was "Esperanza" and there was never a ship quite as fine as she; bright and clean as a new-minted florin and still ringing from the hammers of the building docks at Coble. Everything about her was as new as ninepence, including her master, and an apprentice sent from Trinity House to sail Cape Infinity under the staff of the pilot. Two more different people than Master Roche and Apprentice Anelle you would be hard put to imagine, Fraser. Roche was a great heavy slug of a man; newly symbiosed and unable to do any wrong. His machineself was from an admiralty warship crippled in a skirmish with Commonality privateers and his fleshself had been chief engineer on a decommissioned company trader. A recipe, Fraser, for as boorish and insensitive a creature as ever aspired to the command of a star vessel.

Anelle was unlike him as black is white. Now, it's not as unusual as you might think to have woman pilots, for no one can say where the gift of foresight will rest, but it's said that for women and ships, where beauty leads sorrow always comes following and Anelle was as beautiful as a Darkwinter's night is long. There was never one as lively, as quick to learn and laugh, as Anelle, and of course the pilot soon came to love her for her dark beauty. But it is not wise for any teacher to love his pupil too much. And if the pilot came to love his apprentice, he also came to hate his master, and this is why.

The advice of a pilot is never to be taken lightly, as every shipmaster knows. All save Master Roche, who believed only in his own infallibility. To impress the admiralty selectors who had symbiosed him to this command he programmed his machineself to take "Esperanza" on the fastest, most direct course through Cape Infinity to the New South Georgia Colony. Now, all pilots make their approach to Cape Infinity through the north or south spin-poles, which, though slow, are safe. Only a fool would attempt to take a ship straight through the accretion disc where the event-density is so high as to render even foresight unreliable. But though the pilot argued day in, day out, Master Roche would not be swayed, and as the navigational computers were not just under his command, but an actual part of him, "Esperanza" held her course into the heart of the black hole.

One day, after another futile debate which only set pilot and master further at odds, the pilot stormed from the flight-deck in search of Anelle. These days only her brightness and kindness made living bearable for him. He stamped into her room in a dreadful humour, and then stopped, and stared. He should have been horrified, he should have retched and covered his eyes, he should have turned his back and run away through the miles and miles of corridors to the furthest parts of the ship. But he did none of this. All he did was stare. For Anelle turned to greet him, and her breast was open and within delicate mechanisms moved and molecular circuits oozed.

Then she told him that she was the first of the new race, that after a thousand years of study the machines had identified and isolated the phenomenon of foresight and had learned how to duplicate it artificially. So that no human should needlessly cast wind and limb to the sky again, they had built a new race of machines ready to step forward to take man's place on word of Anelle's success. She was a machine, and still the pilot loved her.

Then the pilot felt the whole million-ton bulk of ship and transports shudder beneath his feet and he knew that they had arrived at the black hole and now he must call the master's bluff. Reaching out with his foresight he beheld the rainbow ring of the accretion disc and ordering short-sail, he took his ship down into the maelstrom. The buffets struck like the fist of God and "Esperanza" rolled and yawed like a pig, but he held her and the wind screamed into the singularity, seizing the ship like a glass float in a hurricane and driving her down that great gullet past shards of shattered planets and round gravitational whirlpools deep enough to drown whole worlds in. "Esperanza" plunged towards the shatter-point, and just as gravity reached out to smear her into a radio-stain on the thin edge of the accretion disc, the pilot took her up and out and over and the ship howled across the face of that ring of solid ylem like every demon of Samhain Eve was after her soul, her way lit by insane neutron lightnings that crawled across the crust. Ahead lay the singularity and the sight of it awed every soul aboard into silence. Even Master Roche crawled from his cosy parlor to stare in wonder and horror, unaware that it was his foolishness and the pilot's arrogance that had brought them to this terrible place. But at the sight of him the pilot felt the rage boil over inside him and his concentration broke and his foresight vanished like a burst bubble.

Then it happened that a gobbet of unimaginably dense matter broke away from the accretion disc and spun into "Esperanza's" path. So close to the horizon it was invisible to normal senses, and though it brushed "Esperanza" as soft as a butterfly's kiss, that kiss swept away the portside arms and sails and crewmen in an instant. Worse, it threw "Esperanza" into a funeral orbit spiraling down to a final rendezvous with the edge. Lacking enough sail to break free, the pilot calculated that in less than an hour the ship would drop below the horizon and be lost. But if the

crew could blast free from "Esperanza's" hulk in the cargo modules, they could use the black sun's momentum to fling them into the polar approaches and safety. All agreed that this was the only means of survival.

All save Master Roche. His mission would not be abandoned, his ship would be repaired using the automated systems of his machineself, passage would be effected and no dissent brooked. Twice he called for all hands to damage control. Twice he was refused. A third time he ordered them, and being refused a third time, turned to face the pilot and ordered the men to arrest him. And the pilot's fury broke. With a cry he swung his silver-shod staff high and brought it down on Master Roche's head. There was no doubt that he died then for everyone heard bone snap. For an instant they stood stunned at the thing the Pilot had done, and then hurried to save themselves before Roche's machineself recovered from the death of his flesh.

But Anelle would not come. You see Fraser, she was a machine and machines are not as free as you or I. The pilot pleaded and begged and told her she would surely perish, but she thought not. Working at machine speeds, she could indeed repair "Esperanza" as Roche had maintained and return her to port.

Then the pilot said that if she loved him she would come and at that she was sad and said, "But I am not yours, Mr. Christian Pilot, that I am free to come. I must remain here where time runs out and centuries pass like seconds, but I will not forget you if you will not forget me. Look for me in the steely-bright flash of summer shooting-stars or the winter-shadow of my sails across the moon for one of these years I will return to you I promise." And with that she turned a joyful cartwheel across the flightdeck and the pilot went down to the waiting cargo module and never saw her face again.

Now Fraser, they say there's no sin in a man loving a machine, for all men agree that in love the outward form is of no consequence and many men have loved machines that are not even remotely human. But what if the machine loves him back?

And this is the second part of Christian's story.

Above the dirty skylight wisps of blue are at last showing through the wet-cotton clouds where the gray rain-kite keeps watch. You sit together in the airy space of a disused packing shed each absorbed with your own thoughts. Christian's fingers play over the bottom end of his staff, like a blind piper, over the place where there are no notch marks. Who can tell what he is thinking? Your head is full of heroes and villains. Which was the pilot? Hero: for playing the brave navigator saving his crew, or villain for letting his stupidity get them into trouble in the first place? He killed his captain with one blow from his silver-shod staff; does that make him a hero or a villain? Villain in the eyes of the law, but a hero to you, you decide.

Kicking your way home through the damp sand you find that the circle

of your thoughts has brought you round to Christian's caravan in the dunes. It looks old and shabby on this gray afternoon. Paint blisters are popping on the door panels and the steps are worn white with traffic, but there is really no better place for you to be with Christian's story rattling round in your head. How nice it would be, you think, to have a black kite of your own to float on the edge of the world like one of your little driftwood dreadnaughts. And with that thought comes a terrible certainty of what you want to do, and you creep up the stairs into the caravan.

Its perfect blackness outshines any of the other gaudier kites. "Black as the Black Sun," you whisper and reach out to take it, to feel an echo of that neutron lightning. Your fingers sink into the blackness, there is nothing there to touch. Startled, you jerk your hand away and the fabric comes with it. Stuck to your fingers, the black material tears silently.

Horror drives all the air out of you. It is like heaven has fallen. For a numb second you cannot breathe. You imagine Christian's iron tread coming up the stairs, finding you as he found you that first time. You search for a place to hide the pieces of shredded kite but there is nowhere where Christian will not see the desecration.

In your ears is a tight singing like you are going to cry, but you dare not afford that luxury. You scoop up the black kite, its delicate ribs snapping like sparrow's bones, and hide it under your raincoat. Ribbons of black nightmare trail from below the hem. You run from the caravan, run from the skewbald pony who is watching and knows, run all the way home as if Hell itself had opened up behind you.

Now that you have had time to think about it, everything seems so very much worse. Of course it is only a matter of time until Christian finds his replacement black kite missing, and that makes you a thief, which is much much worse than a vandal. How you wish you had not taken the black kite, how you wish you had never touched it, how you wish you had never met Christian and his wretched kites! It is no use wishing now.

Consumed with dread, you sit by your bedroom window. Downstairs you can hear the faraway, safe sounds of the patrons making merry. You can clearly pick out Da's voice and the cheeky step-a-jig of brother's mandocello. The binoculars are by your hand on the windowsill. You could pick them up and see if Christian is still flying the first black kite, but you are afraid that if you do you will see only empty sky. The wind is rising, quarreling round the rooftiles, but you daren't look out to watch it. And you daren't look under the bed either, for there you have hidden the splinters of kite.

The later it gets the more the fear grows. What if Christian already knows what you've done through foresight? Will he then forgive, or is he preparing some punishment too dreadful even to think about? Hero, or villain? There is no doubt about which role you play. You wrap your quilt around you and wish wish wish that this night was over.

Tomorrow you will explain. You will take the kite and tell him it was an accident, and you won't mind what he does because anything, *anything* is better than this waiting in fear. Firm with resolution, at last you slide into a shallow, dream-ridden sleep.

The tapping wakes you. The wind is really wild now, snatching at the guttering and beating the pear trees in the garden together. Lashing branches and storm-driven clouds racing through the twilight throw crazy, scary shadows over the carpet. For a moment terror holds you, because you think that he has stepped out of your dream into the world of shapes and substances. Then you listen. The inn is quiet. It is well past even the unofficial closing time, but there is this tap, tap, tap, clearly audible over the shrieking of the storm, like a little winter-blighted bird seeking entrance at the window. You turn to look, and there it is.

A great black kite as wide as the sky is flying outside your window and tapping gently on the glass as it dances on the edge of the storm. The stormkite.

At that same instant of horrified recognition there is a hammering on the door downstairs. That door is six-inch ship-timber, but under those blows it sounds as fragile as dried drift.

"Open up, Mr. MacHenry, open up, I say!" That bellowing voice drains all motion from you.

Christian.

Locks are being drawn back, latches lifted. The door scrapes open.

No, Da, don't let him in, don't let him near me! you want to shout but the words have dried in your throat. The stormkite scratches malevolently at the glass. It is almost as if it has *summoned* this evil wind to come hunting you.

"Where is he, where is the boy, the thief, the little thief who stole my black kite?" Christian's voice sweeps Ma and Da away like leaves in a tempest.

"No Christian, I didn't steal, I didn't," you whimper and dive to lock the door. Da is shouting loudly now, demanding names and reasons, ordering your brother to run up to the Coastguard Station for help, but Christian roars "Silence!" and even the storm falls quiet for an instant.

In that instant you know he has foreseen and found you.

Now he is coming up the stairs, one step, two step, three step, four, now he is on the landing, now he is at the door.

The door handle rattles, the door jars against the lock. There is a pause for a second, then an ugly shout with nothing of the pebble-worn old voice of the kiteman left in it.

"Boy, open the door! Open this door; give me back my kite and I will go in peace, just return my property to me, I have dire need of it."

There is no way you will ever open that door.

Then the blows come, each one twice as heavy as the one before. The doorframe shudders under the impacts. Surely no human fist could strike that hard, and every second the blows double in strength.

There is an explosion and the door blows into splinters. Christian stands there like a tree riven by lightning, holding his staff in both hands. Blue fire shimmers around its silver heels.

"Fraser, where is my kite?" There is a grief too heavy for whole worlds to bear in those words.

Time freezes over like a winter estuary; Christian, your Ma, your Da, your sister trembling by the bannister, all stand frozen like bulrushes in January as you present the dead, ruined thing to Christian.

"It was a mistake," you plead, holding it up before him. "I touched it."

Christian looks down at you from light-year's distance.

"Oh Fraser," he says, with aching gentleness, "Fraser!" and that final syllable howls out in a roar that goes on and on and on and on and you tear at your ears and squeal,

"Stop it Christian, stop it, stop it, stop it!" And at last it does stop and the room is empty.

Christian and his kites are gone.

Replaced by: a hall full of grim people with lanterns and weapons, someone asking, "Where Fraser, where where?" light catching on shot-guns and polished coastguard cap-badges, all these come to you like an album of summer snapshots. What is real is that dreadful, dreadful scream ringing round and round on your head. You know it will echo there for always.

"Where Fraser, tell us where!" the voice insists.

"Caravan by the cannery, in the dunes," you sob and in seven words betray him.

"Right!" Heavy men in heavy boots stamp in the hall. Hastily wrapped in a heavy sea-coat, your own brother carries a ponderous whaling lance and such a look on his face that he may not have to use it. The men crunch off down the path in puddles of lantern light. Ma takes you upstairs, but you struggle free and skip away from the snatching hand. Then you are after them into the twilight.

How fast they are! You had hoped to dash ahead of them and warn Christian, but the heat in their blood must drive them on like ship's boilers. They are easy to follow: the sway of their lanterns and the mumble-grumble of their angry voices carry over the windswept dunes and when those are lost there are their heavy, nailed bootprints pressed hard into the sand. Boots are good in the sand, that is why they are so far ahead of you, slithering and sliding in your slippers. The sky hangs huge above, yet the stars feel as close and familiar as thistledown. Meteors kindle away to nothing on the edge of the horizon.

There are no kites flying in the gloaming above Cannery pier.

In the hollow in the dunes is a yellow knot of lanternlight. Men's voices are raised, ugly and angry, and Da's ugliest and angriest of all. You scrabble up the dune face and part the grass to peer down unnoticed into the valley.

In a circle of yellow light, Christian sits on the steps of the caravan

turning the smashed frame of the black kite over and over in his hands. The stormkite sits propped against the rear of the caravan by his side. Da is shouting questions and the faces of the men come to arrest him are grim, but Christian does not look up. They might as well not be there.

Tiring of Christian's obstinacy, Da gives an order. The men close in. Two of them grasp Christian and drag him to his feet. He does not resist. The kite falls from his hands and is unheedingly trampled under the heavy boots.

You cannot bear to see this. You cannot let them take him without a word. You climb to the crest of the dune and shout, "Christian!" You wave to him, he must see you. "Christian!"

Heads turn. Every eye fixes on you standing there in your dressing gown and slippers.

"Fraser," your Da cries, "Fraser, you shouldn't be here. Away home with you; Dougal, take him home." Obediently, your brother drops his whaling lance and comes for you, feet sinking deep in the sand. Christian stirs, sees you.

"Ah, Fraser," he rumbles like sad stones rolling on a beach. With a slow flex of his muscles he throws his captors away from him and comes to you. There are shouts. Men surge around Christian. There is scuffling. Christian is incredibly strong, strong as iron. Men tumble and wrestle in the sand. There are oaths and cries. The sudden crack of a shotgun splits the night in two.

The old skewbald pony goes mad with fright, plunging and kicking. The hollow is full of frantic motion.

"Hold the horse, the damn horse, somebody hold him," a man shouts. One man dives for the frenzied pony's halter, the others try to hold Christian down. The pony shies away from the looming man and kicks out.

From your forgotten vantage point you are perfectly placed to see the awful thing that happens next.

In its skittering dance the pony kicks a lantern against the caravan wheel. Glass shatters and burning oil splashes all over the woodwork. Paint blisters, blackens, burns. Within seconds the caravan is a bonfire.

The wind fans the greedy flames; with an ugly, gleeful roaring and sucking they snap and shrivel the lovely thing. The beautiful kites are seared away like so much scrap paper. The sunkite and the moonkite, the dragon and the butterfly and the hawk, the windkite and the kite with clouds on it, all turned to ash in a second. Even the stormkite by the door shrivels and bursts into flame. The blazing timbers crumble and the burning caravan folds up and collapses inwards in a gout of fire.

There is nothing left of the stormkite but a white metal skeleton. With its death the wind dies down.

The fire knocks the fight out of everyone. The men watch with horror. This was not their intent, to burn the beautiful caravan, they only came to bring justice to this man who stands looking with eyes nailed open by the flames. The blaze settles lower. Soon it will be out.

Christian turns away. His eyes search for you, but you know that it is his foresight, though so blinded by the actions of other people that he was unable to avert any of this night's tragedy, which finds and fixes you. He holds you with his gaze and you cannot look away. He raises his hands to his face. The men close in, hasty to act. He holds them back with a gesture. This is for you only. Then he will go.

"Fraser, I can't blame you though heaven knows I ought to. But does any snowflake in an avalanche feel responsible? No less you for your simple, good-hearted ignorance. Perhaps I'm still paying the price of the pilot's pride; if so, it was bought dearly."

He touches his hands to his cheeks in a curious motion. And his face falls into his hands.

The men gasp and step back, reaching for weapons.

Up on the dune you feel like your soul is being torn out by its roots.

Delicate mechanisms ooze and pulse where Christian's face once was. The gray eyes sunk in gray metal look into you.

"You had to rush ahead and find the end of the story before I led you to it, didn't you Fraser? So now you know, and I hope you're the wiser for it.

"You see, if you'd listened I'd have told you how I had the surgeon on the transport make me into this unchanging thing, for otherwise how could I have borne all those years of waiting past and those yet to come? Mere flesh will be dust when she returns across the sky, so I must clothe the perishable in imperishability to be there for her. And, how else could I truly love a machine, unless I became one too?

"But look at this face, Fraser, look at it and know that it is agony to be a machine, to be only the memory of flesh. Ask yourself, what could ever be worth that price? Only the certainty of her love. I have her promise that she will return, and unlike men, machines are bound by their word. I had that certainty, the only valid coin I possessed, and you took it from me, Fraser. Oh, the kite was pain enough, but even then I could still have hoped, but what if they now take me and try me and put me in a cell? I cannot fool myself. For that shadow across the face of the moon could be hers, or those footsteps passing beneath the bailey wall. And then my mortal soul in this immortal frame will die a little. You see, I'll never be certain, and only the certainty made life bearable. Now I will never know. But you know, Fraser."

And he nods to the men with his machine head, and they reluctantly come and take him away.

And that is the last part of Christian's story.

But his face still looks up from the sand into the dawning sky and you know you will never be able to meet the gaze of those empty eyes.

Though the days no longer hold the frenzied heat of summer, there is still a lingering warmth as they dwindle towards the perpetual midnight of Darkwinter.

The beach is still a good place for a boy to play on the short afternoons, when school is done and friends gone home, when Da is serving and Ma busy with mussel soup and soused gurnards, when sister is reading in the weather-room and brother in town for a new set of strings and even Mr. Cat prefers the company of the bugs under the veranda. The cannery is still there, though folk don't go there so often now they've chained it off and hung warning signs giving notice of its demolition, and the hulks remind you rather too much of things you would sooner forget. But there are always the games a boy can play with the sea.

Thousands of games, some as old as the sea itself, others that swim up like new-hatched elvers out of your imagination. There are imaginary countries to be mapped, peopled and invaded on the uncharted wastes of the shore. There are springs to be forded, bridged, dammed and then blasted back into their original state. There are messages, some cryptic and coded, some just a hopeful call for a reply, to be sealed into bottles and readdressed to the waves. There is never any want of things to do on the beach.

And when he tires of games, a boy can always beachcomb along the tideline for whatever treasures the ocean chooses to release. Glass fishing floats, rusty chunks of metal that might once have been ship's fittings, bottles (always empty) worn opaque by tumbling sand, lengths of rope, oddly shaped pieces of driftwood, sea-purses holding a fortune in grit, pieces of crumbled cork, feathers and bones. . . .

The sea casts up some funny things: you never know what a boy might find if he searches long enough. ●



MARTIN GARDNER


(from page 46)

SECOND SOLUTION TO THE BLACK HOLE OF CAL CUTTER

Here is the paragraph:

"Perkins screamed and flung himself upon the floor; Margaret clutched at her heart with both hands; Dorothy, though her eyes looked like black holes in her white face, looked at him [DuQuesne] steadily and asked, 'This is the end, then?'"

For corrections on the July puzzle please turn to page 95.



The author, whose short fiction has appeared in numerous places (including *Playboy*, *Omni*, *F&SF*, *New Dimensions*, and *Orbit*), has published two novels, *Starhiker* and *Junction*, and a third, *The Man Who Melted*, is forthcoming from Bluejay Books.

He last appeared in *Asim* in our December 1983 issue with "Time Bride," a story he co-wrote with Gardner Dozois.

art: Robert McMahon

by
Jack Dann

BAD MEDICINE



Stephen was trapped in the sweaty darkness and eagles were devouring him, tearing off pieces of flesh and flapping their wings, blasting him with waves of wet searing air.

He woke up coughing, pushing his way out of the dream and into the secure and familiar darkness of his bedroom. His wife Helen stirred beside him, then turned over, pushing her rump against him. He looked over at the digital clock on the nightstand: it was five-thirty in the morning.

He sat up in bed. He had a long drive ahead of him, and he was nervous about going. That was why he had slept fitfully during the night. It was a relief to be awake, to be *going*. The morning darkness made everything seem unreal now that he was sitting up in bed, already removed from the security of everything he knew and loved. He felt like a ghost in his own house.

Who the hell would have thought that he, of all people, would be getting into this kind of stuff? Into religion, and Indian religion at that . . . as if his own wouldn't do. Christ, being a Jew was hard *enough*. Well, he thought, if I hadn't met John, then it probably would have been something else. He was looking for *something* . . . some kind of meaning, something that rang true. An authentic religious experience. He'd smoked the pipe with John, who rented the furnished room under Stephen's real estate office, smoked it out of curiosity, or perhaps just to do something he could talk about. But when he smoked that pipe in the woods with John, he felt . . . something, something that breathed power and truth. It was as if Stephen could somehow *feel* everything the earth felt . . . he couldn't verbalize it. He still couldn't say if he really believed. But he was *willing* to believe.

He smiled to himself. He was a realtor turned mystic.

"Steve?" Helen mumbled, then, as if finding her voice, she said, "What are you doing up at this hour?"

"I told you, I'm going with John to that guy's vision-quest ceremony."

"Oh, Jesus . . . why don't you just take us to the Temple? The kids would like that. It is Saturday."

"We've been over this a million times," Stephen said. "I know how you feel, but this is something I want to do. Please try to understand. Think of it as a passing phase, male menopause, something like that."

She reached toward him, but he was too geared up to make love. His mind was on the ceremonies, on the vision-quest and the sweat-lodge. Some guy was going to sit naked on top of a hill without eating or drinking for four days . . . just to have a vision. Screaming for a vision, they called it. And he, Stephen, was going to sit in a sweat-lodge . . . if he could survive it.

He wished he could just make love to Helen and make everything right. But he *couldn't*. He just couldn't turn himself on and off.

She drew away from him; he knew she was hurt and angry. "First it was all that Zen-Buddhism business at the college," she said, "and then

that pseudo-Jungian philosopher, that self-styled guru, what was his name?"

Stephen winced, and shook his head. "I don't remember. . . ."

"And then there was the Transcendental Meditation kick, and that goddamn EST, which you dragged *me* into. Christ, that was the worst. They wouldn't even let you go to the bathroom during those stupid meetings. And now it's something else. Do you really believe in all this Indian business?"

"I don't know *what* I believe in."

"And I don't know why I converted . . . you don't seem to want to have anything to do with your own religion."

"We did it for the family," Stephen said lamely. Helen had always been a religious woman; she *knew* that God existed. Perhaps He'd made Himself known to her in the operating room, amidst all the cancer and broken bones and smashed skulls. She was an operating-room nurse. She had told him that it didn't matter whether she was Christian or Jewish. God was God. But Stephen shouldn't have asked her to convert. Now he had a responsibility to her which he couldn't live up to. He was a hypocrite . . . and now Helen had nothing. She wasn't comfortable in the synagogue without him; it was a foreign place to her.

"I did it for you," she said softly. She always looked the best to Stephen in the morning, her thick long black hair framing her childlike face. "I don't know what you think you can find with those Indians. I think you're getting into something dangerous. You're not an Indian."

"Just bear with me a little bit longer," Stephen said. "I feel I have to do this." He kissed her and stood up. "Go back to sleep, I'll be back tonight and we'll talk about it."

"I'll be here," Helen said, yawning. She'd been on call all last night and had only slept for a few hours. "I do love you . . . I hope you find whatever it is you're looking for. . . ."

John was waiting for him on the metal steps which led up to Stephen's real estate office. He was wearing a woolen shirt over a torn white tee-shirt, faded dungarees, worn boots, and a vest with lines of bright beads worked in geometrical patterns. He was in his early sixties, and he wore his coarse white hair long in the Indian fashion. His face was craggy and deeply-lined. That face looked as cracked and baked as the earth itself, as if it were some undecipherable roadmap of the man's past. On his lap he held a soft white and blue rolled-up blanket. Inside the blanket, protected, was his ancient pipe and an eagle's wing.

The morning light was gray, and the air was still full of the night's dampness.

John stood up when he saw Stephen, but he paused, looking at the sky as if something was written there that he couldn't read. Then he got into the car and said, "I stopped being *wrong* today." Stephen looked perplexed. "You know," John continued, and then he raised his hand to his

mouth as if he were drinking from an invisible bottle. "Gonna lay off the booze. Gonna stay straight . . . I figure I owe it to Sam, the guy we're going to see, to help him out with his ceremony."

Stephen got onto Route Seventeen easily; there was hardly any traffic at this time of the morning, especially on a Saturday. Those who were going to the Catskills for the week-end had already left last night or would be leaving later today. The light fog and slanting morning sunshine gave the mountains a dreamlike appearance, as if they'd been painted by Maxfield Parrish.

John kept his window open, even though there was a chill to the air. The breeze made Stephen uncomfortable, but he didn't say anything to John. John seemed to be looking for something, for he kept leaning forward to look upwards out of the windshield. "What are you looking for?" Stephen asked.

"Eagles."

"What?" Stephen asked.

"When I became a medicine man," John explained, "I was given the gift of eagles."

"I didn't know you were a medicine man."

"A sweat-lodge man can also be a medicine man . . . and vice versa. But I'm a good sweat-lodge man; that's probably why Sam wants me to help him out with his sweat."

"You never talked about being a medicine man," Stephen said. He wasn't going to give John the chance to change the subject so easily.

"I haven't been a medicine man for a while. Booze and medicine don't mix."

"What did you do when you were a medicine man?" Stephen asked.

"Same things I do now, mostly . . . except for the drinking. I used to help people out."

"How do you mean?"

"Just help out."

"Like a doctor or a minister?"

John laughed at that. "Maybe like both."

"What do the eagles have to do with it?" Stephen asked.

"They're my medicine."

"You're talking in circles."

John chuckled, then said, "I always went on binges. My downfall was always the booze and the broads, but then I'd pray my ass off and try to be right again and sooner or later the eagles would come back, I'd look up and there'd always be one or two just circling around, way the hell up, and, man, those eagles would keep me on the straight path, keep me good, until I just couldn't stand being right and I'd go and get messed up and leave all my responsibilities behind, and I'd lose the eagles again. I haven't had them for a couple of years now, since I've been on the booze. And I've been paying for *that*, you'd better believe it. Now I'm right again, I think maybe they'll come back."

"I still don't understand," Stephen said. "Are you telling me that wherever you go, there are eagles flying around . . . even in the city?"

"I've seen them in the city . . . once. It was my first time in New York, and I was scared shitless of all those cars and concrete and people. One of the people I was with . . . we went to do some politics and ceremonies . . . pointed up to the sky, and sure as shit there was an eagle making a circle. I wasn't afraid to be in that city anymore . . . I mean I was no more afraid than the next guy."

"No disrespect," Stephen said, "but I'll believe it when I see it."

"Maybe when we do the sweat . . . maybe one will fly into the sweat lodge and bite your pecker off," John said. "Then would you believe?"

Stephen laughed. "Yes, *then* I'd believe."

They reached the outskirts of Binghamton in the early afternoon. It was a clear sunny day, dry, with the softest touch of fall. Stephen turned onto a rough road flanked by white cement gas stations, and they drove uphill, over a bridge that overlooked an automobile graveyard, and followed the turns as the road narrowed.

"I've been here before," John said, "so I'll remember the house."

"Is it your friend's house?" Stephen asked.

"Sam's parents own it. It's a farm, and Sam is sort of living there now."

"How do you come to know him?"

"Sam came to learn some things from me when I was living in South Dakota," John said. "He was hoping to become a medicine man."

"Is he?"

"Never quite came around that way. Like most of us, he got sidetracked. Fell in with some kinds of people."

"What do you mean?" Stephen asked, slowing down for a turn. There were trees thick on both sides of the road. This was good country, gnarly and wild, and, although close to the city, thinly populated.

"He got medicine things mixed up with human things," John said. "All the people he was with were blaming everything on bad medicine instead of on themselves. When anything had happened, they thought that somebody had done something to them."

"What do you mean?" Stephen asked nervously, remembering what Helen had said to him this morning . . . that they were dangerous. Maybe he *was* getting in over his head.

"They blamed everything on sorcery."

"Sorcery? Do *you* believe in that?" Stephen was a non-believer, but just the idea that magic could be real, that there was more than just getting up in the morning and going to bed at night, excited him.

"Sorcery's real," John said flatly, quietly. "Medicine is just there, it can be used in good ways or bad ways. But I think that Sam just got himself messed up. He came out west for a sun dance, and stayed with me for almost a year. He started to become a pretty good sweat-lodge man, but he wanted to go too fast, he wasn't ready to be a healer, and

I thought he should work and learn from someone younger for a while. So I sent him to Virginia, where a Sioux guy I know lives . . . Joseph Whiteshirt. He's a young medicine man with a good talent. Anyway, Sam needed to study in a different place. Different places have different medicine, different powers. Well . . . he ended up screwing the guy's wife and almost got himself a knife in the belly for that. Was a lot of bad blood between Sam and Whiteshirt . . . maybe some bad medicine, too. Anyway, Whiteshirt blamed me for what happened with Sam and his wife. He thought I put Sam up to it or something. Everybody got sick . . . I guess I was responsible. When they needed help, I was drinking and didn't have any power to help anybody, including myself. But that's no excuse. . . ."

"So where's this Whiteshirt now?" Stephen asked. Christ, he was getting into something over his head.

"He's at Sam's . . . so is his wife, they got back together."

"What?"

"There's still a lot of bad blood," John said, "but Whiteshirt has to help Sam out on his vision-quest whether he likes Sam or not . . . if he's a real medicine man. Maybe doing some ceremonies together will help them all out."

"What about you?" Stephen asked. He was nervous about this whole thing now, but he couldn't back out. He knew it was foolish, but it was a matter of male pride. Helen would have laughed at the idea of him still being macho, here in the quiche-eating eighties, but there it was.

"Maybe it'll help me out, too," John said, smiling faintly. "But then again maybe the ceremonies won't change Sam and Whiteshirt and the other people mixed up in this, maybe their hearts will stay hard. You sure you still want to go along? If you're nervous, you can drop me at the house. I'll get back. No trouble.

"I came to do a sweat and I'm going to do it," Stephen said.

John laughed. "Don't worry, I won't let you die in there. . . . You'd better start slowing down now," he said as Stephen came to another sharp curve in the road.

On Stephen's side of the car were hayfields stretching back to smooth, fir-covered hills. The fields were still green, but beginning to brown. An old cannibalized mowing machine was rusting in the middle of one of the fields. On the other side of the road, on John's side, were a few modern, expensive houses owned by executives who worked in town, but they were outnumbered by farms and the everpresent country shacks, their front yards littered with old car hulks and ancient appliances, their porches filled with mildewed mattresses and torn couches and broken cabinets.

"There's the house," John said, pointing. It was red clapboard, set about fifty feet from the road. Behind it on higher ground was a dilapidated red barn and several storage sheds. The sheds were unpainted, and one was caving in.

Stephen pulled into the driveway, behind a green Ford truck, which had a poster in the rear-view window proclaiming that it was an Official Indian Car. On the back of the truck was painted AKWESASNE in large block letters.

"What does that mean?" Stephen asked.

"It's a Mohawk reservation, not far from here," John said. "It got invaded, you might say, by white folk . . . poachers, and the Indian people had it out with the state police. Sam was there, so was Whiteshirt. But there ain't no more poachers."

"What about you?" Stephen asked.

"I was home getting blind." Then, after a beat, John said, "There might be people here who are really against me . . . do you still want to come?"

"Christ, I'm already *here*," Stephen hoped he would not regret it.

"Anyway, you don't believe in any of that superstitious nonsense like we were talking about, do you?" John asked, grinning, his demeanor suddenly changed, as if he had just put on a mask, or taken one off.

"You're crazy," Stephen said. Yet he felt a chill run down the back of his neck . . . or perhaps it was just sweat.

They crossed the road and cut across a field, passing the rusting mowing machine. On the western edge of the field was woodland. They walked through the woods, which opened up into a clearing. A man in his late twenties with jet-black shoulder-length hair waved at them as they approached him.

Stephen knew it was too late to turn back now.

"Steve, this is Sam Starts-to-Dance," John said.

He doesn't look like an Indian, Stephen thought as he shook hands with Sam. Sam's features were fine and thin, almost nordic; but he wore a beaded shirt and a headband . . . and he did have that black hair.

"I'm glad you came," Sam said to John, as they all walked over the stones of a dry riverbed onto a well-worn path that wound up a gentle incline. "I didn't think you were going to make it."

"I told you I'd be here," John said flatly.

"We got the sweat-lodge ready," Sam said, "and the women went and got the meat; they're preparing it now. Are you going to take flesh?"

"Didn't Whiteshirt take flesh?" John asked. He stopped walking just before they reached the crest of the hill.

"He said he thought it was proper for you to do that."

John nodded. "That's good . . . how are things going? Still bad blood?"

"Whiteshirt's doing what he's supposed to," Sam said. "He's helping me to do this thing. But it feels very bad between us. Most of the people that were with him in Virginia have left. He's got new people, too many Wannabees."

"What's that?" Stephen asked.

But John laughed. "A Wannabee is a white who wants to be an Indian." Stephen felt his face grow hot. "Don't worry about that," John said.

"Anyway," Sam said, "I hear that there's some bad stuff going down there at Whiteshirt's place."

"Is he back together with Janet?" John asked.

"Yeah, she's here with him. She's taking care of the other women."

"Well . . . that's good."

"She did a lot of sweats, and vision-quested, and the spirits told her to stay with Whiteshirt and help him out. That's what she says. But it's over between us. Even though she says she doesn't love Whiteshirt, what we did was wrong. It was my fault, and you were right, it was a human thing."

"Happens," John said. "Maybe it can be put behind all of you."

"But I still think something's going on."

"Bad blood doesn't mean there has to be bad medicine," John said.

Sam didn't say anything; he looked down at the ground. Then he said, "Janet told me some things . . . that Whiteshirt blames you for what happened. He thinks you sent me to him to bring him trouble."

"Why would he think that?" John asked.

"He says the spirits told him that you were using bad medicine on him because you'd lost your power . . . because you'd stopped being a medicine man. He thinks *you're* a witch." After an awkward pause, Sam said, "I think Whiteshirt's jealous of you."

"Why?"

"Because most people come to see you when they have problems, even when you're drinking . . . most traditional Indian people don't have much respect for Whiteshirt. They call him a white man's medicine man."

"Maybe we'll talk about that," John said, "or pray about it."

"I think you should be very careful, anyway," Sam said. "Whiteshirt's changed. He's not the man you used to know."

"I'll think right about him until I see otherwise."

"I'm glad you're here," Sam said. "It's going to be right for me now, I can *feel* it."

"Well, we're soon going to find out," John said; and then he turned to Stephen and asked, "You know how Sam got his name?" John had put on another one of his masks and switched moods. "He touched a rock in the sweat-lodge once and jumped around so much that he got a new name."

"It certainly beats being called Sam Smith," Sam said, and then he went on ahead to let everyone know John was here and going to take flesh.

"Sam likes you, I can tell," John said.

"How can you tell that?" Stephen asked, distracted. He was uneasy about all this. Sam and John talked about magic as if it were a given. They didn't even question it!

"You think he'd talk like that if he didn't?" John asked. "You can feel right about Sam."

"What's this taking flesh business?" Stephen asked. If it's what I think

it is, then I *will* have to leave, he told himself. It was almost a relief to think about leaving . . . to have a valid excuse.

"You got that bad face on again," John said. "You don't have to come along on this, I told you. If you're worried and—"

"Just tell me about this flesh business. What do you do, cut somebody up?" Although he'd committed himself to trying to find God or *something* inside the burning steam of the sweat-lodge, Stephen would not stand by and watch someone get mutilated.

"It's a ceremony," John said. "It's a kind of prayer, a gift . . . the only thing we really have to give of our own is our flesh. That's the only thing that's really ours. So everyone who wants to make a gift for Sam, that he should have a good vision-quest and find what he's looking for, everyone gives a little of himself. I usually take flesh off the arm, with a needle. I don't carve out steaks, if that's what you think."

"Are you going to do this to yourself, too?"

"I might have Whiteshirt take my flesh after Sam's vision-quest is over . . . if everything is okay. But not now, people might think I was following my ego and not my heart. After the vision-quest is a good time to do that; also, there'll be lots of food, Indian food . . . a good time. You'll see . . . maybe I'll even take flesh from you."

"The hell you will!" Stephen said, and they walked down the hill toward the ceremonial grounds below. Stephen glanced up at the sky; there were certainly enough birds flapping around up there. Maybe some of those were John's eagles, swooping around, waiting for John to get to be a medicine man again.

Maybe they weren't, either.

John introduced Stephen to several people, one of whom was white: a young guy with shoulder-length dirty-blond hair who was wearing a headband, faded dungarees, and a teeshirt. He asked Stephen if he wanted to smoke his pipe. Stephen politely declined and sat down under a large oak to watch John take flesh from the men and women standing around him.

Although he felt awkward and out of his depth, Stephen could not help but be awed by this place. It seemed to be completely secluded, a grotto. The sun filtered through trees, giving the place a dusty, soft quality, and the blanket of leaves on the ground made Stephen feel somehow secure here . . . and it *seemed* quiet, even though children were running around, shouting, playing games, and men and women and adolescents were all busy doing something: attending the large fire, which would heat the rocks for the sweat-lodge; tearing pieces of cloth; carrying stones and blankets; or just sitting around talking in huddled groups, passing pipes back and forth.

But sitting under that tree, feeling the cool dampness of the ground, smelling grass and sage and the burning of the fire, Stephen felt as he had when he smoked the pipe with John.

He watched John as he talked to a young woman wearing a sleeveless flower-patterned blouse. She had curly reddish hair and looked Mexican. She held John's pipe in both hands upon her lap and stared at it. Her mouth moved. She must be praying, Stephen thought. Then John began making lines down her arm with a razorblade. He gave her a yellow piece of cloth to hold in her palm, and with a needle began to remove tiny pieces of her flesh. She didn't flinch as John cut her, and Stephen noticed that she had scar-lines from previous cuttings . . . neat little indentations, pieces of flesh removed. They made Stephen think of tattoos.

To Stephen's right, about thirty feet away from him, was the sweat-lodge, a small, squat, round frame of willow shoots covered with old blankets. A dark-skinned woman with wiry hair pulled back from her face was piling up blankets and tarpaulins beside the lodge. About ten feet east of the sweat-lodge several men were attending a large, crackling fire, which had been prepared in a special way under the supervision of a scowling heavy-set man. Rocks for the sweat-lodge had been placed on the fire, and the heavy-set man squinted at them, as if he was reading the entrails of some sacred beast.

"These rocks should be just about ready now," one of the men shouted to John, who nodded.

Stephen just looked at the sweat-lodge nervously and wondered how the hell anybody was going to fit in there. It was so *small*.

The woman who had been piling up the blankets said something to the heavy-set man and walked over to Stephen. She couldn't have been more than five feet tall; she had a dark, flat face, high cheekbones, dark large almond eyes, and a thin mouth. She was missing a tooth, but there was a feral beauty about her; it was as if she, like John, had come from the earth. She carried a different map etched across her face, but the lines were there, even though she looked to be only in her mid-thirties. There were laugh lines and worry-lines on that face, which looked like it had never been touched by make-up. There was also a smell to her, the smell of the fire mixed with perspiration, a perfume like grass and mud, sweet and sour. "You came with John, didn't you?" she asked.

"Yes . . . although I feel like a fish out of water."

She chuckled. "I'm Janet, Joe Whiteshirt's woman. This is a good place, been some good ceremonies here, good feelings, before . . . before a lot of things turned sour and people's hearts became hard to each other. But John is a good man . . . and so was . . . is Joe. Maybe Sam's vision-quest will bring them close again. I know Sam told you about . . . us. He liked you."

"That's what John told me," Stephen said, "but you couldn't prove anything by me. He hasn't said anything to me—he was talking to John."

"Before a vision-quest is a quiet time, you're not supposed to talk much or mingle around. A vision-quest is dangerous. Sam's getting ready. Sometimes people who go up on the hill don't come back . . . people have been known to just disappear."

"Do you *believe* that?"

"Yes," Janet said, "I do."

More bullshit, Stephen thought with a sudden flash of renewed skepticism, but he kept his mouth shut about that. "Why do they do it, then?" he asked almost embarrassedly.

"We go to have a vision, sometimes find a name . . . the spirits give us things there . . . medicine. You find out who your spirits are, where you came from. Hasn't John told you *anything* about this?"

"A little," Stephen said. "I guess I never felt right about asking."

"I can see why he likes you. I once heard John tell Joe that we're like trees, all of us. But when you look at a tree you only see the trunk and branches and leaves, but deep down in the roots is where we take our life from, that's where the dreams and visions are . . . that's where our life comes from. That's why we vision-quest . . . to go back to the roots . . . and don't you worry while you're in the sweat, no matter how hot it gets," she said, changing the subject. She gave him a sprig of sage, pressed it into his hand. "Use this in the sweat-lodge, it'll help you breathe easier. You breathe through it like this"—and she showed him—"so you won't feel the heat so bad. It really helps."

"Thanks," Stephen said, feeling awkward.

"Everyone will take care of you," Janet continued. "No matter what's between John and Joe, neither one will let any harm come to you." But she averted her eyes from his when she said that, as if she wanted to believe it, but somehow couldn't.

"Which one is your husband?" Stephen asked. He was on edge—soon he would be in the sweat-lodge with them all, helpless.

"The big one, tending the rocks on the fire."

Stephen looked towards the fire and saw Whiteshirt, the same heavyset man he had seen before. Whiteshirt had a large belly and huge arms. His black hair was long, and for an instant, when their eyes met, Stephen felt a chill feather up his spine. The man seemed to looking right through him.

"Those rocks have to be hot for the sweat-lodge; they glow like coals," Janet said.

Then there was a loud crack, and something hit the tree just above Stephen. Stephen and Janet jumped away from the tree.

"It's those damn river rocks," Janet said apologetically. "They explode sometimes like that. The next time, if there is a next time, we're going to bring our own rocks."

But Stephen had the uneasy feeling that Whiteshirt had somehow *willed* that rock to explode . . . as surely and as certainly as if he had fired a warning shot from a pistol.

The women brought out bowls of raw heart and raw liver. Everyone took a piece, even the children. When it was Stephen's turn, John said, "Eat just a little. It's good for you, give you strength." Then John bit down on a large piece of raw liver.

Stephen ate a piece of the chewy, slippery meat quickly, not knowing whether he was eating heart or liver, hoping he wouldn't gag. God knows what kind of germs are crawling around on this meat, he thought. He wondered if he'd get sick on it, or develop worms. . . .

It was time to go into the sweat. The willow-stick skeleton of the lodge had been covered with old blankets and large tarpaulins.

John and Stephen took off their clothes behind a tree and left them in a pile. Stephen hadn't brought a towel or blanket for himself, but John got one for him. They walked around the sweat-lodge, careful not to walk between the altar and the lodge. The altar was a mound of dirt set back from the opening of the sweat-lodge; the ceremonial pipes were propped against it. John told Stephen to wait, that Janet—who was keeping the door, as he called it—would tell him when to enter. Then John crawled in through the low, narrow opening, and said, "*Pila miya*, thank you." Whiteshirt crawled in after him, but not before giving Stephen a look of pure hatred, as if he hated Stephen just because he was with John. But the others would no doubt interpret it as simply Whiteshirt's dislike for honkies. Two young whites and two Indians, who looked like brothers, followed Whiteshirt into the sweat-lodge.

Stephen stood back, feeling anxious and also foolish wrapped in a blanket and holding the sprig of sage that Janet had given him. He didn't want to sweat . . . not with Whiteshirt in there.

Sam walked over to Stephen and said, "Come on, your turn next." Then he smiled and said, "Don't worry, it'll be a good sweat, good ceremony. Jim and George, they're brothers, they know some old songs, and John, he's one of the best sweat-lodge men around. He says you and he are a lot alike." Sam laughed. "Both fucked up."

Stephen forced a smile and crawled into the sweat-lodge, trying not to crawl on his blanket and trying to keep it around his waist. Sage and sweetgrass had been scattered over the earthen floor, and their smell was overpowering. He already felt claustrophobic, even though the door of the lodge was still open, letting in some light. But he felt locked in—the blankets and tarpaulins and willow sticks of the sweat-lodge might as well have been made of steel. He could hear the women standing and chatting outside. They would listen to the prayers and watch for the eagles to dive out of the sky into the top of the sweat-lodge.

"Did John ever tell you about his eagles?" Sam asked Stephen in a whisper. He was sitting on John's right. "Those eagles can really be something. We've had them right here inside the sweat-lodge. . . ."

What the hell am I *doing* here? Stephen asked himself as he grunted something back to Sam. He sat back against one of the willows, but the sweat-lodge was so small that he couldn't sit up straight. He looked at John, who looked back at him, but didn't say a word; then he looked at Whiteshirt, who was gazing into the pit in the center of the sweat-lodge, where the rocks would be placed. Everyone sat with his legs crossed, but even then, toes were almost touching the pit. Stephen would have to watch himself, lest he burn his feet.

There was a tension in here, palpable, growing stronger. Stephen felt a pressure on his eyes, and he looked up. He caught Whiteshirt glowering at him. Whiteshirt averted his eyes and stared once again into the pit.

But Stephen was certain that Whiteshirt was going to make trouble . . . for all of them. He felt the hair on the back of his neck rise. It was too late to get out now.

"Okay," John said, "let me have a small rock," and Janet handed in a glowing coal on the end of a shovel. John used a forked stick to push it into the hole. He asked for his pipe, which he purified over the coal. He sprinkled sweetgrass on the rock, and the sweetgrass sparkled like fireflies.

John passed the pipe around, and everyone made a prayer. Stephen just asked that he get out of here alive. Then John asked for more rocks, and Janet brought in a shovelful. John took a large rock and placed it in the center of the hole with his stick, and said "*Ho Tunkashila*," which everyone repeated . . . everyone except Whiteshirt, who seemed to be praying on his own, as if he had to purify the lodge himself, as if John was making them impure. But John ignored Whiteshirt and scraped the rocks from the shovel. Stephen could feel the heat already, and then John said, "Okay, close the door," and everything was darkness, except for the reddish glowing rocks. Every bit of light was blotted out, for the women outside stamped down the blankets wherever the men saw any light.

"Aha," John said, "we thank the rock people, the rock nation, for these good rocks which are sacred, we pray they will not break and kill us in the darkness. It is from your sacred breath, the breath of life, that we inhale, that our people will live. Oh, rocks, you have no eyes, no ears, and you cannot walk, yet you are life itself, alive as we are."

Then John explained the ceremony. He talked about how the *Inipi*, the sweat-bath, was probably the oldest ceremony in Indian religion. "The steam brings friends and families and even enemies together. It heals. It is the strongest medicine. The sweat is a way to make ourselves pure, and it gives us much of our power. No matter what the ceremony—sundance or vision-quest—we do this first. It binds us. Even though Sam here is going to vision-quest alone on the hill, we all sweat with him now. We pray together and suffer together. We'll help him now, and he'll remember when he's alone on the hill tonight facing the dreams and spirits." Everyone agreed, and there was much yeasing in the darkness. Only Whiteshirt was silent.

John prayed to the Grandfathers and the Four Directions. He prayed to *Wakan-Tanka*, he prayed for the two-leggeds and four-leggeds and wingeds and everything else on the earth, but he also seemed to be talking to God as if He were a presence in the sweat-lodge. He prayed for everyone in the sweat-lodge, for Stephen who he said was walking a different path, yet they were all walking together . . . whatever the hell that meant, Stephen thought.

But in the blackness, you couldn't tell if you were cramped in a small

space, or whether you were somehow suspended in eternity. Stephen felt as if everything was being pushed up right against him, yet paradoxically, he had no sense of breadth or width or height here. He felt dizzy. He could hear the others beside him . . . he could smell them. It was already getting too hot. It was difficult to breathe. He stared at the glowing rocks, and heard the water swishing in the bucket as John stirred it with the dipper . . . and he *felt* Whiteshirt's glowering presence, even though he couldn't see him in the dark. He felt that same pressure against his eyes and knew that Whiteshirt was watching him.

It was then that Stephen realized how frightened he was.

John prayed, but Whiteshirt was praying louder, trying to drown him out.

John poured a dipperful of water onto the rocks.

It was as if a gun had been fired. Suddenly, Stephen couldn't breathe. He was screaming, bending forward to get away from the searing steam. Everyone was shouting, "*Hi-ye, Pilamaya*, thank you, thank you," and Stephen found himself shouting, too, but he didn't know what he was saying.

He had to get out of here. He was going to die. He pressed the sage to his mouth, but it was still like breathing fire. He didn't know where he was; it was as if part of his mind knew, but another part was soaring, taking him miles into darkness, from where he might not return.

Another retort, as more water was poured on the rocks. This time, though, it didn't seem so bad. Stephen heard the brothers singing. The melody was strange and harsh and ancient; through what seemed to be a hole in Stephen's consciousness, he could hear John's prayers for them all.

"If anybody has to eliminate, that's okay," John said. "This is a place to get purified, to get out all the evil, to get all the garbage picked up from the world outside out of your system."

Stephen started coughing. He couldn't get his breath, but he heard Whiteshirt say, "The evil's right here, *inside* the sweat-lodge."

"Well, if it is, then we'll just have to burn it right out," John said in an even, cutting voice.

George laughed at that. "Don't worry, John . . . if you get burned, I'll take over the ceremony for you."

After a pause, John said, "We came here to pray, remember? And to sweat." Then he poured water on the rocks.

Stephen felt the pain as a searing wave. He pressed his blanket to his face, trying to breathe, trying to find respite from the rising heat. After a few seconds, he could breathe again. He removed the blanket from his face and stared into the darkness. He could swear that he could see something flickering in the blackness. John would have called them spirits.

Sam handed Stephen a bucket to cool him off, and automatically Stephen ran his hands through his hair. It was hot to the touch, as if on

fire. He splashed water on his face. I'm not going to last, he thought. John had told them all that if anyone had to get out to say, "All my relatives," and the door would be opened for them.

Stephen would try a little longer.

More rocks were brought in, glowing red, and Stephen burned in the darkness. But he thought he was beginning to understand something about this ceremony, that if he was going to pray—and he really wasn't sure if there *was* anyone or anything to pray to—he had to do it like this. Prayers had to be somehow *earned*. You had to go through the pain and sit with your ass in the mud like an animal.

He felt the mud beneath him. He was part of the earth. He was connected.

As the steam exploded again, Stephen thought of Helen and his children, and he started crying for them, for the pain he had caused them . . . and he hallucinated that he was not drenched in sweat, but in blood.

John told everyone not to wrap their towels and blankets around themselves, but to let the steam sink into their bodies. "The pain is good," he said as he ladled more water on the rocks. Stephen heard the hiss of steam and felt the hot blast burn over him.

"The pain is only good if it comes from the spirits," Whiteshirt said loudly, belligerently. "Only the spirits can burn away bad medicine . . . only *they* can drive a witch out of the sweat-lodge. . . ."

John began to pray, as if nothing had been said, as if nothing had gone sour. "Oh, Grandfather, *Wakan-Tanka*, we're sending you a voice. Please hear us . . . pity us for we are weak. Give us the strength and wisdom so that our hearts may soften."

Whiteshirt began praying, too. But he was praying as if he was fighting. He was mocking. He was accusing. He was trying to drown out John. But John didn't raise his voice.

The tension was electrifying the steaming, boiling darkness.

Then John decreed that the first round was over and called for the door to be opened. Janet, who looked distraught, pulled the blankets and tarpaulins away from the sweat-lodge . . . letting in the blessed light and air and a cool, chilling breeze.

John explained that this was going to be a "hot" round. He also told everyone that this was going to be a "spirit round," and that anyone could ask the spirits for help, or ask them to answer questions, but they'd better be sure they really wanted an answer.

Then Whiteshirt said, "Just as long as it's really the spirits that's doing the talking."

John ignored the remark, as he had the others, and called for the "door" to be closed. Once again the women draped the blankets and tarpaulins over the lodge and it was pitch-dark inside.

Maybe John hadn't ignored Whiteshirt's remark, after all, for he ladled

enough water onto the rocks to melt iron. Stephen buried himself in his blanket to escape the burning steam, and everyone shouted thanks.

Stephen gagged and coughed. For an instant, everything went blank. Then Stephen found himself praying and crying for his family, for every family, for everyone. He was praying and crying *because* of the heat and the pain. He believed in the spirits flickering all around him, and yet at the same time he disbelieved. Part of his mind seemed to shrink back, and he was left with the part that believed what was happening to him. He was in the center, he was praying for his own, for himself, for his family . . . and for the trees and the rocks and birds and animals and every other goddamn thing in the world. Words were *things*. They could do things. They could help or harm. Magic was real.

And praying was something that was as practical as cooking food.

Then he caught himself . . . he was thinking crazy.

His lungs were raw, but he wasn't coughing. He saw things in the darkness; maybe they were words or spirits or just something like the patterns you see behind your eyes when you press them hard with your palms.

One part of him saw the trails of spirits. Another part dismissed them. He was fighting with himself, believing and disbelieving, and just trying to breathe . . . to stay alive so he could get out and know that he had done it.

The spirits flickered in the dark and left trails like particles in a cloud chamber.

John poured more water onto the rocks, and everyone screamed with pain. Time seemed to slow down for Stephen, contracting hours and events into instants. In these flashing beads of time were buried hours of mistakes and cruelty, all the memories of his life. He screamed out against himself, for everything wrong he had done, for his failures as a man, as a father and a son and a husband, and he saw blood . . . he was breathing it . . . he was tasting it . . . it was the very steam itself . . . it was the rocks, which were of the same stuff, coagulated.

Then the questions began.

Everyone had a question for the spirits, and John seemed to be talking, but it wasn't quite his voice. It was somehow shrill, and it certainly wasn't John's personality. He was laughing at almost everything; he was cutting, witty, nasty. But always laughing . . . and Stephen began to believe that it really *wasn't* John who was speaking. He heard different voices, yet he didn't hear what the spirits were telling the individual people in the sweat-lodge. The words seemed mostly garbled, except for a phrase or sentence here or there. John had told him that usually happened . . . that you only heard what you were meant to hear . . . what was important for *you*. This was a private place, even with the others sitting and groaning and sweating beside you.

But when it came to Stephen's turn, he didn't ask the spirits any questions. Once the spirits gave you an answer, you had to follow what

they told you to do, and Stephen wasn't taking any chances. John, however, asked for him. He seemed to appear in the middle of those spirit voices, and he asked that Stephen be helped to find himself with his family. The spirits thought that was funnier than hell, and it gave Stephen a chill to hear those laughing voices and see those flickerings in the dark. He wondered what had happened to John. He felt naked and alone. Vulnerable.

Did John just disappear? Or was he just talking funny . . . of course, *that* was it.

It was . . . and it wasn't. Something else seemed strange in Stephen's mind. Even if the flickerings and the voices were phoney, he found that he somehow didn't care. It was real even if it wasn't. That felt true, but it didn't make a bit of sense. Still . . .

Then it was Whiteshirt's turn. Stephen had blanked everyone else out, just as John had told him to do. But he was going to listen now. He supposed everyone else felt the same way because the tension returned to the darkness like a storm.

It was then that Stephen saw the coal move in the pit.

Whiteshirt picked up the glowing coal, hot as it was, and put it in his mouth. It illuminated his face in red, as if that face was hanging in the darkness, disconnected. It was as if Whiteshirt had become a spirit himself . . . or maybe the spirits were *inside* him. Whiteshirt turned toward John and grinned; the coal was clenched between his teeth, its glow illuminated the hatred and frustration and sickness on his face. Whiteshirt was making a funny keening noise as if the spirits were speaking through him.

It's a trick! Stephen thought. It's got to be. . . .

Then the coal moved toward John, as if Whiteshirt were embracing him. John screamed, an animal scream of pure agony, and the smell of burning flesh pervaded the sweat-lodge.

"Open the door, for Christ's sake," Sam shouted. "All my relatives. Goddammit, open the door!"

The women pulled down the blankets and tarpaulins from the willow framework of the sweat-lodge. The light was blinding. Everyone was silent, stunned. John had fallen forward. Blood oozed from large ugly gashes in his back. It wasn't the glowing coal that had burned and cracked John's flesh; the coal was just a symbol of Whiteshirt's power. It was the heat that had torn him open . . . the heat contained in Whiteshirt's burning heart.

John groaned and sat up, shaking his head as if warding off something invisible. Whiteshirt stared at him in hard satisfaction. He didn't say a word, but his wife, Janet, applied sage moistened with her spittle to the gashes in John's back. John flinched every time she touched him.

"You were wrong to do this thing," she said to her husband.

"I didn't do it," Whiteshirt said flatly. "It was the spirits."

"You were *wrong*," Janet said again, and Stephen could see in her face

how much she hated this man . . . or perhaps the intensity of her hatred was fueled by love and guilt.

"This can't go on," Sam said. "I'll vision-quest another time. I need to pray about all this . . . let's forget it all for now."

"No," John said, a quaver in his voice, "we're going to do the last round . . . and you're going to keep your promise to the spirits and make your vision-quest. Today. But first there's something between Joe Whiteshirt and me that has to be finished. Everybody, get out of the sweat-lodge. We're going to let the spirits decide about this bad thing that has come between us."

"The spirits *already* decided," Whiteshirt said. "They made their mark on your back. Do you want them to burn you again?"

"That was you, Joe," John said. "So you *are* using medicine to get what you want. But you won't get it. Nobody will follow you . . . you're a witch, not a medicine man." John spoke in low, even tones, as if he were simply reciting facts. But he was trembling, exposing his rage and humiliation . . . and perhaps his fear.

"This time you'll die," Whiteshirt said. "That will be proof enough."

"We'll see. . . ."

"You're not going to do this thing," Janet said to Whiteshirt, but it was already as good as done because the men were leaving the sweat-lodge.

"What's going on?" Stephen asked John, but John wouldn't answer him. He just nodded his head, indicating that Stephen should get out with the others.

When everyone was out, John said, "Close it up." The blankets and tarps were thrown back on the lodge, and one of the men handed in a shovelful of glowing rocks. Janet had refused to act as keeper of the door.

John asked for another shovelful . . . enough for *two* rounds.

"More rocks aren't going to help you," Whiteshirt said.

John didn't answer. He was praying in Sioux.

Stephen tried to approach Sam and Janet and ask them to try and stop John and Whiteshirt from sweating. Sam just shook his head, and Janet gently told him not to interfere in matters he didn't understand. So Stephen went back to the sweat-lodge and stood with the others. An older woman in a cotton print housedress stood beside him. Every once in a while, she would nervously look up at the sky, as if watching for eagles . . . waiting. Even the children were quiet. Everyone was listening, waiting to hear what was going to happen inside the sweat-lodge. There was a communal sense that what was about to happen was out of human control. The next few minutes would, indeed, be decided by the spirits.

"Close the door," John said, and the keeper of the door closed the last opening of the sweat-lodge with a tarp.

Stephen could hear John stirring the water with the aluminum ladle. Then there was a hissing of steam as John poured some water on the rocks. Both men prayed in Sioux. Once again Whiteshirt prayed louder

than John, drowning him out. But then he switched to English. He called John a witch . . . a spy for the white world. He blamed John for what had happened between Sam and Janet. He blamed John for sending Sam with a disease . . . bad medicine, a disease that had afflicted everyone at Whiteshirt's camp. But now the spirits were going to put things to right. He called them down from the heavens to destroy his enemy.

Whiteshirt worked himself into a frenzy.

When Whiteshirt paused to catch his breath, John said, "Okay, we will let the spirits decide. We'll make this a short round." Then there was an ear-splitting cracking sound like an explosion inside the sweat-lodge. Everyone outside jumped back. John must have thrown most of the bucket onto those rocks. And right after that there was another explosion.

"You bastard," Whiteshirt screamed. "You're going to die for this."

But now John was praying . . . it was his turn to scream for the spirits. "Oh, Grandfather, *Wakan-Tanka, Tunkashila*, send down the eagle to guard the sacred pipe and the life of the People. Send *Wakinyan-Tanka*, the great thunderbird to scourge out the evil." He intoned, "Send us the one that has wings, but no shape. Send us the one that has an eye of lightning. Send us the one that has no head, yet has a beak filled with the teeth of the wolf. Send us the winged one to devour whatever is bad inside us, just as it devours its own young."

Stephen listened, his hands resting on the outside of the sweat-lodge. He heard a flapping noise like the working of wings. It sounded as if there was a huge bellows inside the sweat-lodge. The noise grew louder. Something was beating against the inside of the sweat-lodge. Stephen could hear and *feel* it slapping against the blankets and tarpaulins. It was as if a great bird was trapped in there with John and Whiteshirt, and it was thrashing its wings, beating to get out of the darkness . . . to find the cold blue of the upper air.

But that's impossible, Stephen thought, even as he felt the sweat-lodge shake.

There was scuffling inside . . . and screaming.

Then there was sudden silence.

Stephen pressed the side of his face against the rough canvas of the sweat-lodge to hear better, but all he could hear was his own heart beating in his throat . . . a tiny trapped eagle.

"Open the door," John said in a voice that was hardly more than a whisper. "It's over. . . ."

They quickly pulled the tarpaulins and blankets away from the willow frame of the sweat-lodge . . . and found John sitting by himself. He blinked in the bright sunlight. His pipe rested on his lap. He didn't seem to notice that he was sitting stark naked, his blanket underneath him. He looked pale and drawn, as if he had just sweated away part of his life. The dead coal that had been in Whiteshirt's mouth lay in the dirt before him. It was all that was left of Whiteshirt.

Whiteshirt had disappeared. . . .

"Do you believe in the eagles now?" John asked Stephen.

Stephen could only shrug. It was all some sort of a trick, he told himself, even though the hairs on the back of his neck were still standing up. Whiteshirt couldn't have just disappeared . . . he had to have sneaked away somehow.

John smiled weakly. "Next time, maybe the eagles *will* bite your pecker off." Then he raised his head and gazed into the sky. He was still smiling.

Stephen looked uneasily upward at the eagles circling high overhead, and he thought about Helen and his children and the blood he had tasted inside the sweat-lodge. There wouldn't be a next time, he told himself. He was certain of that. He was ready to go home.

Perhaps John understood because he started laughing like a spirit. ●

GAMING

(Continued from page 20)

and buildings. In addition, there are eight car counters (representing the battlecars), eight "pedestrian" counters (representing the battlecar drivers if they leave their vehicles), eight speed markers (to record speed on a chart provided), and 28 weapon markers that show a type of obstacle dropped by a battlecar—oil, smoke, mines, or spikes.

The object of the game is to be the last surviving car with a driver on the board. The only way to do this is to destroy the other battlecars. After setting up the terrain on the game board, each player takes a battlecard display card, a pedestrian display card, and counters representing the car and driver (which are placed directly on the board).

You now arm your car with any of the weapons counters available. Each car is slightly different in design. Some have weapon pods only; others have pods and gun turrets. The amount of room (spaces) in a pod determines how many and how large a weapon counter you can place there.

Each player moves his/her car(s) based on the speed indicated on the display card. Acceleration, deceleration, skids, cornering, and ramming are all well-illustrated in the small rules booklet. Moving, however, is used primarily to position your vehicle for a good shot at the opponent's car. After determining the range in points to the target vehicle (or pedestrian), you remove the weapon from the pod (fire), then roll to see if you hit the target. If a hit is scored, damage is recorded by rolling the die, adjusting for the range, and marking the display card of the target car/pedestrian in the appropriate location. There are also passive weapons (smoke, mines, spikes, and oil) that can be dropped behind you to deter tail-gaters.

Damage to a car is first recorded on the armor blocks (spaces) on the display cards. When an armor block is completely filled (destroyed), the next hits pass into the interior of that section. A weapon pod, turret, tire, engine, or fuel cell is then hit and damaged/destroyed. Three hits on a driver kills that player.

Battlecars plays very quickly and is great fun for an evening of board-gaming. ●



The author has appeared in *F&SF*, *Twilight Zone*, and *Interzone*. For the past year and a half he's been concentrating more on his newborn son and less on fiction, but he hopes to write more this year.

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by
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THE ALIEN STATION

1.

Louise Green, almost sixteen, pored over her geography text book, memorizing world climate zones, and felt the walls of her stuffy little bedroom close in around her. It was not just the heat, although the heat was bad enough, had been ever since her father had gone on his conservation drive and turned down the air-conditioning. It was her *life*. Louise yearned for something, anything, new. She felt . . . *stifled*.

She reached, almost unconsciously, to switch on the radio beside her bed. She twiddled the tuning knob up and down the spectrum, finding a signal, listening for a moment and then moving on once again. The top forty stations bored her, but so did the rock stations, and she did not even consider the sweet music stations. She yearned for something, anything new, twiddling the tuner back and forth, back and forth, a habit which had infuriated her family and her friends to the point at which it had become an entirely solitary vice.

And then she struck that heavenly connection. The alien station came bursting through those tired old airwaves, on that long and hot summer night, to electrify the nation, and not least Louise Green.

2.

The music was, well, *strange*. Not phony strange either, not just mystery movie soundtrack strange like some of the stuff they played on the rock stations. Much stranger than that. Genuine strange. Quirky and spacey and flowing all around her. She was, immediately, completely transfixed. Literally, hand frozen on the radio switch, mouth slightly open. It was like nothing on earth she had ever heard before.

And after the music, the voice. The strange and utterly mysterious softly crooning voice. *"Let's go flow,"* said the voice. *"Flow down and around and under we go, around and down to the big nest, the best nest, the nest in the west, go flowwww . . ."*

The words were silly if she stopped to think about it, the words meant everything or nothing, but the voice, the voice seemed to shiver down her spine and awaken feelings she had hardly glimpsed before, feelings that made her warm all over, warm and cold, cold and warm. Oh, it was quite a voice, and the voice in turn had nothing on the music.

"This is station zero," said the fabulous voice, while the eerie music shimmered behind it, *"zero on the big clock that counts the time, coming to you always and forever, coming to you from the clouds."*

And then the music swelled up again, different but the same, swirling around her. New.

So very new she could hardly breathe.

3.

The alien station was heard across the North American continent, pumping out its soft, sweet strangeness. It was heard at first by a few, and then, as the news spread, by many.

Soon, the newspapers and TV newscasts were full of reports on the alien station. It was the great mystery of the moment. The origin of the broadcast signals could not be tracked. They seemed to be coming from everywhere and nowhere. Neither could they be jammed.

"It's a hoax," said Mr. Green, reading the paper over his morning bowl of bran cereal. He spoke firmly, definitively. Mr. Green was an engineer with a sizeable oil company, and above all a practical man. "Just a hoax."

"No it isn't," Louise said.

She turned on the radio in the kitchen, tuned it to the alien station. Music filled the room.

"There," she said.

Mr. Green grimaced.

"Oh, I believe that there's such a station. What I don't believe in is that there are *aliens* running it. It's all just some wild get-rich-quick scheme. You'll see. And turn that off, I can't stand all that moaning and wailing; it's giving me a headache."

Reluctantly, Louise turned off the radio.

"And," her father said, "I don't want you listening to it again."

"You can't stop me," she said, suprising them both.

And both knew that it was true. They stared at each other uneasily over the breakfast table.

"I don't really understand," said her elder sister, Diane, "what all the fuss is about."

"That's because you haven't really listened," Louise said. "But you will understand. You will."

These past few nights, Louise had hardly slept at all. Instead she had lay under the covers, drinking in the sounds of the alien station murmuring softly to her in the night. And yet she did not feel at all tired. If anything she felt energized, invigorated. The world seemed once again to be an exciting place, full of brightness and newness.

"Stop that," Diane told her irritably.

"Stop what?"

"Stop *sparkling* your eyes."

4.

"*News*," said the voice on the alien station, "*news from everywhere. Everywhere the news is good. Everywhere you look and listen. Listen, listen. Listen to your station of the stars and the planets and the great big clockwork universe, spinning around your heads.*"

Ross Duncan, station manager of what had once been one of the nation's most highly rated rock stations, took another deep pull from the paper cup on his desk. There was a colorless liquid in the paper cup and it wasn't water. It was only eleven in the morning, the fifteenth morning following the debut of the alien station, and Duncan did not usually start so early. There were, however, extenuating circumstances.

"I don't believe it," he said.

"I'm sorry," said his research chief, Linda Welcome, in the sort of tones a doctor might use in breaking bad news, "but you have to believe it. We've checked these figures every way we know, and it comes out the same. We're off 90 percent, give or take a few points."

"Oh no," Duncan said. "I believe that. In fact, we're holding up a little better than I expected. What I don't believe is that they could do this to me."

"It's probably just a fad," she said. "You know, like King Tut. Or pet rocks."

"Or rock and roll," Duncan said, gloomily.

He freshened his drink.

"Think about that," he said. "Think what it must have been like, way back in the 1950s, when the first white kids started to tune into those black radio stations. They must have thought they were picking up Mars, or something. But once they made that hit, they could never get enough. It was all over for old Perry Como."

"And now it's all over for us?"

"All over now," Duncan agreed.

"*White light*," crooned the voice on the alien station. "*Today and tonight, bright white light, everything's alright.*"

5.

"But what do they want?" mused Mr. Green, reading yet another piece of speculative analysis in his morning newspaper about the sensational alien station. "What's in it for them?"

"They love us," Louise said, simply. "That's all."

"They have a funny way of showing it," Mr. Green said. "Why don't they just come down here and talk to us instead of playing that infernal music all the time?"

It was now generally believed, even at the highest government levels, that the mysterious station was indeed an alien visitation, if in a most peculiar form. Officially, the government took the position that the supposed alien signals were illegal, contrary to international broadcasting conventions, and that the perpetrators must face arrest and trial. Unofficially, spokesmen were already broaching the possibility of a deal, should those perpetrators show up to negotiate.

"Perhaps they're ugly," Diane suggested. "Perhaps they have green tentacles and pulpy mouths. Perhaps they're afraid of frightening us."

"Perhaps," Louise said. "But whatever they look like, I'm sure they're beautiful. Inside."

6.

And the strange music played on, week after week, month after wonderful month. All through that long, hot and glorious summer and into the fall the alien station continued to be the sensation.

It was a great time to be alive. Louise began dating Curtis Best, who

she met through the local chapter of the Zero Heroes. They took long walks, listening to the alien station on their boomboxes, or drove around aimlessly in Curtis' father's station wagon.

On her sixteenth birthday they made love in the back of Curtis' father's station wagon. They did so, of course, to the tune of the alien station.

Curtis was seventeen, soft-spoken, with visionary eyes. He believed that the coming of the alien station signalled a new dawn for mankind.

"No more war," he would say. "No more crime. No more hating and killing and stealing."

Many people felt the same way.

And still the alien station played on, day after day, night after night, engulfing the nation in its sweetness and light.

These were, indeed, great days.

7.

For Louise the end came suddenly, terrifyingly.

She was in her room, studying for another exam. Outside it was snowing, the first snowfall of the winter, glowing softly under the streetlights. Louise loved snow, had always loved it, at least the first snow of the year, it made the world look so clean.

She was, as always, listening to the alien station as she studied. She could not seem to get enough of it, could not fill herself up completely with those alien rhythms and patterns and the beautiful swirling words, she was insatiable.

"*Timecheck*," said the voice—it was not always the same voice, the different voices had different qualities, although they were unutterably mysterious and warm and sexy. "*Check the time. Time is now, now and forever. Now's the time. Time to take a tip. Take it from us. You can't beat it. Can't beat a Geeform Disintegrator.*"

Louise looked up from her textbook to stare at the radio.

"*No more hefting trash around with a Geeform!*" the voice continued. "*Beats household garbage to atoms in moments. Disintegrates anything! Food scraps, waste paper, tin cans. Harmless to living tissue. Beautify your home with a Geeform, available in a choice of decorator colors. Time for a Geeform. Runs off household electricity. Just \$69.95 plus local taxes. In good stores everywhere, real soon. A product of Alphane Industries.*"

The heat was running perfectly efficiently in the Green house, but Louise suddenly felt cold, very cold. She crossed to the phone and called Curtis. He had, of course, been listening too.

"Maybe," he said tentatively, "it's some local station. Breaking in with their own message."

"No," she said. "It was them alright."

"Well, you know," Curtis said, "it really sounded quite useful. In fact I was thinking of getting one for Mother's Day, except they didn't say where."

"They'll say where," she said.

"There's still the music," Curtis said. "That hasn't changed. And you know, it must have been a pretty expensive business, coming all the way here and broadcasting like that. They have to eat too, at least I suppose they do. You shouldn't let this upset you."

"It does upset me," she said.

She hung up the phone. And she turned off the radio.

8.

"Pimply people, love your pimples to death with SuperLove Pimple Cream. Works like magic, magic from the stars. Wisdom of the space peoples. We do not lie. No, no."

And the alien station played on. ●

THE DREAMING MACHINE DREAMS OF OTHER MACHINES

Of their many parts,
their loose gears rolling
endlessly through space, their cogs
gnashing out each thought
forever lost, gone unrecorded.
A passion lies hidden
beneath each lever, desire
and sadness trapped
inside the circuits
that are plugged and unplugged
so that dumb machinery might forget.
The dreaming machine wonders
what car or telephone or video box
once passed in haste
contains the lost dreams of brother
or sister within the blank metallic face
designed by human anxiety.
Which mother, which father or other
kln has whispered uncalculated times
It's me ... It's me ...

—Steve Rasnic Tem

CORRECTIONS ON "THE ROAD TO MANDALAY"

Last July's column about the talking car contained several mistakes that were first caught by John Kinney, Jr., Eric Olson, Jo Ann Mooney, and later by too numerous readers to mention. When I asked how many times 5 appears on a digital clock between 8 and 9 o'clock, I forgot that on most such clocks the 5 in 8:50-59 remains steady while the unit-numeral changes. Of course what was intended was the number of 5s that would be on a listing of the times displayed.

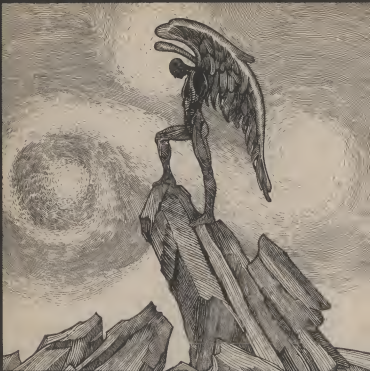
Question 8 left out a crucial parameter. It should have read: What is the largest sum of money, made up of U.S. coins, that will not change a dollar bill, and how can this sum be given by the largest number of coins? The sum is \$1.19, which can be given by one quarter, nine dimes, and four pennies.

In the third question, about a car driving against a wind, then returning with the wind behind, I should have said that the car travels both directions with the same speed relative to the air. As stated, "speed" could be taken as ground speed, which renders the problem meaningless.

The next question, which asked for the number of times from noon until midnight that a digital clock shows at least three numerals that are alike, was answered wrong. The answer given is for the number of times the clock shows *exactly* three identical numerals. The time 11:11 raises the correct answer to 24. Linda Paonessa and Barrie Owen were the first of many readers to point this out.

Richard J. Swaney, who didn't give his address, wrote: "The Hustle must have jarred his (her? its?) memory banks on a pothole or two in the road to Mandalay. My car, which has just had a complete tune-up and logic check, arrived at different answers. . . . Frankly, I wish my car were not always so accurate. It's not the accuracy that bothers me, but his attitude about it. No one wants to drive a car that is constantly tooting its own horn."

Reader Olson proposed another response to the pseudo question: How long is a Chinese science fiction writer. So long.



BITE-ME-NOT OR, FLEUR DE FEU

by Tanith Lee

art: Robert McMahon

The author, last seen in our June issue with "Medra," returns with a story about a kind of a vampire and a kind of love.

In the tradition of young girls and windows, the young girl looks out of this one. It is difficult to see anything. The panes of the window are heavily leaded, and secured by a lattice of iron. The stained glass of lizard-green and storm-purple is several inches thick. There is no red glass in the window. The colour red is forbidden in the castle. Even the sun, behind the glass, is a storm sun, a green-lizard sun.

The young girl wishes she had a gown of palest pastel rose—the nearest affinity to red which is never allowed. Already she has long dark beautiful eyes, a long white neck. Her long dark hair is however hidden in a dusty scarf and she wears rags. She is a scullery maid. As she scours dishes and mops stone floors, she imagines she is a princess floating through the upper corridors, gliding to the dais in the Duke's hall. The Cursed Duke. She is sorry for him. If he had been her father, she would have sympathized and consoled him. His own daughter is dead, as his wife is dead, but these things, being to do with the cursing, are never spoken of. Except, sometimes, obliquely.

"*Rohise!*" dim voices cry now, full of dim scolding soon to be actualized.

The scullery maid turns from the window and runs to have her ears boxed and a broom thrust into her hands.

Meanwhile, the Cursed Duke is prowling his chamber, high in the East Turret carved with swans and gargoyles. The room is lined with books, swords, lutes, scrolls, and has two eerie portraits, the larger of which represents his wife, and the smaller his daughter. Both ladies look much the same with their pale, egg-shaped faces, polished eyes, clasped hands. They do not really look like his wife or daughter, nor really remind him of them.

There are no windows at all in the turret, they were long ago bricked up and covered with hangings. Candles burn steadily. It is always night in the turret. Save, of course, by night there are particular *sounds* all about it, to which the Duke is accustomed, but which he does not care for. By night, like most of his court, the Cursed Duke closes his ears with softened tallow. However, if he sleeps, he dreams, and hears in the dream the beating of wings. . . . Often, the court holds loud revel all night long.

The Duke does not know Rohise the scullery maid has been thinking of him. Perhaps he does not even know that a scullery maid is capable of thinking at all.

Soon the Duke descends from the turret and goes down, by various stairs and curving passages, into a large, walled garden on the east side of the castle.

It is a very pretty garden, mannered and manicured, which the gardeners keep in perfect order. Over the tops of the high, high walls, where delicate blooms bell the vines, it is just possible to glimpse the tips of sun-baked mountains. But by day the mountains are blue and spiritual to look at, and seem scarcely real. They might only be inked on the sky.

A portion of the Duke's court is wandering about in the garden, playing

games or musical instruments, or admiring painted sculptures, or the flora, none of which is red. But the Cursed Duke's court seems vitiated this noon. Nights of revel take their toll.

As the Duke passes down the garden, his courtiers acknowledge him deferentially. He sees them, old and young alike, all doomed as he is, and the weight of his burden increases.

At the furthest, most eastern end of the garden, there is another garden, sunken and rather curious, beyond a wall with an iron door. Only the Duke possesses the key to this door. Now he unlocks it and goes through. His courtiers laugh and play and pretend not to see. He shuts the door behind him.

The sunken garden, which no gardener ever tends, is maintained by other, spontaneous, means. It is small and square, lacking the hedges and the paths of the other, the sundials and statues and little pools. All the sunken garden contains is a broad paved border, and at its center a small plot of humid earth. Growing in the earth is a slender bush with slender velvet leaves.

The Duke stands and looks at the bush only a short while.

He visits it every day. He has visited it every day for years. He is waiting for the bush to flower. Everyone is waiting for this. Even Rohise, the scullery maid, is waiting, though she does not, being only sixteen, born in the castle and uneducated, properly understand why.

The light in the little garden is dull and strange, for the whole of it is roofed over by a dome of thick smoky glass. It makes the atmosphere somewhat depressing, although the bush itself gives off a pleasant smell, rather resembling vanilla.

Something is cut into the stone rim of the earth-plot where the bush grows. The Duke reads it for perhaps the thousandth time. *O, fleur de feu—*

When the Duke returns from the little garden into the large garden, locking the door behind him, no one seems truly to notice. But their obeisances now are circumspect.

One day, he will perhaps emerge from the sunken garden leaving the door wide, crying out in a great voice. But not yet. Not today.

The ladies bend to the bright fish in the pools, the knights pluck for them blossoms, challenge each other to combat at chess, or wrestling, discuss the menagerie lions; the minstrels sing of unrequited love. The pleasure garden is full of one long and weary sigh.

"Oh flurda fur

"Pourma souffrance—"

Sings Rohise as she scrubs the flags of the pantry floor.

"Ned orme y par,

"May say day mwar—"

"What are you singing, you slut?" someone shouts, and kicks over her bucket.

Rohise does not weep. She tidies her bucket and soaks up the spilled

water with her cloths. She does not know what the song, because of which she seems, apparently, to have been chastised, means. She does not understand the words that somehow, somewhere—perhaps from her own dead mother—she learned by rote.

In the hour before sunset, the Duke's hall is lit by flambeaux. In the high windows, the casements of oil-blue and lavender glass and glass like storms and lizards, are fastened tight. The huge window by the dais was long ago obliterated, shut up, and a tapestry hung of gold and silver tissue with all the rubies pulled out and emeralds substituted. It describes the subjugation of a fearsome unicorn by a maiden, and huntsmen.

The court drifts in with its clothes of rainbow from which only the color red is missing.

Music for dancing plays. The lean pale dogs pace about, alert for tidbits as dish on dish comes in. Roast birds in all their plumage glitter and die a second time under the eager knives. Pastry castles fall. Pink and amber fruits, and green fruits and black, glow beside the goblets of fine yellow wine.

The Cursed Duke eats with care and attention, not with enjoyment. Only the very young of the castle still eat in that way, and there are not so many of those.

The murky sun slides through the stained glass. The musicians strike up more wildly. The dances become boisterous. Once the day goes out, the hall will ring to *chanson*, to drum and viol and pipe. The dogs will bark, no language will be uttered except in a bellow. The lions will roar from the menagerie. On some nights the cannons are set off from the battlements, which are now all of them roofed in, fired out through narrow mouths just wide enough to accommodate them, the charge crashing away in thunder down the darkness.

By the time the moon comes up and the castle rocks to its own cacophony, exhausted Rohise has fallen fast asleep in her cupboard bed in the attic. For years, from sunset to rise, nothing has woken her. Once, as a child, when she had been especially badly beaten, the pain woke her and she heard a strange silken scratching, somewhere over her head. But she thought it a rat, or a bird. Yes, a bird, for later it seemed to her there were also wings. . . . But she forgot all this half a decade ago. Now she sleeps deeply and dreams of being a princess, forgetting, too, how the Duke's daughter died. Such a terrible death, it is better to forget.

"The sun shall not smite thee by day, neither the moon by night," intones the priest, eyes rolling, his voice like a bell behind the Duke's shoulder.

"Ne moi mords pas," whispers Rohise in her deep sleep. "Ne mwar mor par, ne par mor mwar. . . ."

And under its impenetrable dome, the slender bush has closed its fur leaves also to sleep. O flower of fire, oh fleur de fur. Its blooms, though it has not bloomed yet, bear the ancient name *Nona Mordica*. In light parlance they call it Bite-Me-Not. There is a reason for that.

II

He is the Prince of a proud and savage people. The pride they acknowledge, perhaps they do not consider themselves to be savages, or at least believe that savagery is the proper order of things.

Feroluce, that is his name. It is one of the customary names his kind give their lords. It has connotations with diabolic royalty and, too, with a royal flower of long petals curved like scimitars. Also the name might be the partial anagram of another name. The bearer of that name was also winged.

For Feroluce and his people are winged beings. They are more like a nest of dark eagles than anything, mounted high among the rocky pilasters and pinnacles of the mountain. Cruel and magnificent, like eagles, the somber sentries motionless as statuary on the ledge-edges, their sable wings folded about them.

They are very alike in appearance (less a race or tribe, more a flock, an unkindness of ravens). Feroluce also, black-winged, black-haired, aquiline of feature, standing on the brink of star-dashed space, his eyes burning through the night like all the eyes along the rocks, depthless red as claret.

They have their own traditions of art and science. They do not make or read books, fashion garments, discuss God or metaphysics or men. Their cries are mostly wordless and always mysterious, flung out like ribbons over the air as they wheel and swoop and hang in wicked cruciform, between the peaks. But they sing, long hours, for whole nights at a time, music that has a language only they know. All their wisdom and theosophy, and all their grasp of beauty, truth or love, is in the singing.

They look unloving enough, and so they are. Pitiless fallen angels. A traveling people, they roam after sustenance. Their sustenance is blood. Finding a castle, they accepted it, every bastion and wall, as their prey. They have preyed on it and tried to prey on it for years.

In the beginning, their calls, their songs, could lure victims to the feast. In this way, the tribe or unkindness of Feroluce took the Duke's wife, somnambulist, from a midnight balcony. But the Duke's daughter, the first victim, they found seventeen years ago, benighted on the mountain side. Her escort and herself they left to the sunrise, marble figures, the life drunk away.

Now the castle is shut, bolted and barred. They are even more attracted by its recalcitrance (a woman who says "No"). They do not intend to go away until the castle falls to them.

By night, they fly like huge black moths round and round the carved turrets, the dull-lit leaded windows, their wings invoking a cloudy tindery wind, pushing thunder against thundery glass.

They sense they are attributed to some sin, reckoned a punishing curse, a penance, and this amuses them at the level whereon they understand it.

They also sense something of the flower, the *Nona Mordica*. Vampires have their own legends.

But tonight Feroluce launches himself into the air, speeds down the sky on the black sails of his wings, calling, a call like laughter or derision. This morning, in the tween-time before the light began and the sun-to-be drove him away to his shadowed eyrie in the mountain-guts, he saw a chink in the armour of the beloved refusing-woman-prey. A window, high in an old neglected tower, a window with a small eyelet which was cracked.

Feroluce soon reaches the eyelet and breathes on it, as if he would melt it. (His breath is sweet. Vampires do not eat raw flesh, only blood, which is a perfect food and digests perfectly, while their teeth are sound of necessity.) The way the glass mists at breath intrigues Feroluce. But presently he taps at the cranky pane, taps, then claws. A piece breaks away, and now he sees how it should be done.

Over the rims and upthrusts of the castle, which is only really another mountain with caves to Feroluce, the rumble of the Duke's revel drones on.

Feroluce pays no heed. He does not need to reason, he merely knows, *that* noise masks *this*—as he smashes in the window. Its panes were all faulted and the lattice rusty. It is, of course, more than that. The magic of Purpose has protected the castle, and, as in all balances, there must be, or come to be, some balancing contradiction, some flaw. . . .

The people of Feroluce do not notice what he is at. In a way, the dance with their prey has debased to a ritual. They have lived almost two decades on the blood of local mountain beasts, and bird-creatures like themselves brought down on the wing. Patience is not, with them, a virtue. It is a sort of foreplay, and can go on, in pleasure, a long, long while.

Feroluce intrudes himself through the slender window. Muscularly slender himself, and agile, it is no feat. But the wings catch, are a trouble. They follow him because they must, like two separate entities. They have been cut a little on the glass, and bleed.

He stands in a stony small room, shaking bloody feathers from him, snarling, but without sound.

Then he finds the stairway and goes down.

There are dusty landings and neglected chambers. They have no smell of life. But then there comes to be a smell. It is the scent of a nest, a colony of things, wild creatures, in constant proximity. He recognizes it. The light of his crimson eyes precedes him, deciphering blackness. And then other eyes, amber, green and gold, spring out like stars all across his path.

Somewhere an old torch is burning out. To the human eye, only mounds and glows would be visible, but to Feroluce, the Prince of the vampires, all is suddenly revealed. There is a great stone area, barred with bronze and iron, and things stride and growl behind the bars, or chatter and

flee, or only stare. And there, without bars, though bound by ropes of brass to rings of brass, three brazen beasts.

Feroluce, on the steps of the menagerie, looks into the gaze of the Duke's lions. Feroluce smiles, and the lions roar. One is the king, its mane like war-plumes. Feroluce recognizes the king and the king's right to challenge, for this is the lions' domain, their territory.

Feroluce comes down the stair and meets the lion as it leaps the length of its chain. To Feroluce, the chain means nothing, and since he has come close enough, very little either to the lion.

To the vampire Prince the fight is wonderful, exhilarating and meaningful, intellectual even, for it is colored by nuance, yet powerful as sex.

He holds fast with his talons, his strong limbs wrapping the beast which is almost stronger than he, just as its limbs wrap him in turn. He sinks his teeth in the lion's shoulder, and in fierce rage and bliss begins to draw out the nourishment. The lion kicks and claws at him in turn. Feroluce feels the gouges like fire along his shoulders, thighs, and hugs the lion more nearly as he throttles and drinks from it, loving it, jealous of it, killing it. Gradually the mighty feline body relaxes, still clinging to him, its cat teeth bedded in one beautiful swanlike wing, forgotten by both.

In a welter of feathers, stripped skin, spilled blood, the lion and the angel lie in embrace on the menagerie floor. The lion lifts its head, kisses the assassin, shudders, lets go.

Feroluce glides out from under the magnificent deadweight of the cat. He stands. And pain assaults him. His lover has severely wounded him.

Across the menagerie floor, the two lionesses are crouched. Beyond them, a man stands gaping in simple terror, behind the guttering torch. He had come to feed the beasts, and seen another feeding, and now is paralyzed. He is deaf, the menagerie-keeper, previously an advantage saving him the horror of nocturnal vampire noises.

Feroluce starts towards the human animal swifter than a serpent, and checks. Agony envelops Feroluce and the stone room spins. Involuntarily, confused, he spreads his wings for flight, there in the confined chamber. But only one wing will open. The other, damaged and partly broken, hangs like a snapped fan. Feroluce cries out, a beautiful singing note of despair and anger. He drops fainting at the menagerie keeper's feet.

The man does not wait for more. He runs away through the castle, screaming invective and prayer, and reaches the Duke's hall and makes the whole hall listen.

All this while, Feroluce lies in the ocean of almost-death that is sleep or swoon, while the smaller beasts in the cages discuss him, or seem to.

And when he is raised, Feroluce does not wake. Only the great drooping bloody wings quiver and are still. Those who carry him are more than ever revolted and frightened, for they have seldom seen blood. Even the food for the menagerie is cooked almost black. Two years ago, a gardener slashed his palm on a thorn. He was banished from the court for a week.

But Feroluce, the center of so much attention, does not rouse. Not until the dregs of the night are stealing out through the walls. Then some nervous instinct invests him. The sun is coming and this is an open place, he struggles through unconsciousness and hurt, through the deepest most bladed waters, to awareness.

And finds himself in a huge bronze cage, the cage of some animal appropriated for the occasion. Bars, bars all about him, and not to be got rid of, for he reaches to tear them away and cannot. Beyond the bars, the Duke's hall, which is only a pointless cold glitter to him in the maze of pain and dying lights. Not an open place, in fact, but too open for his kind. Through the window-spaces of thick glass, muddy sunglare must come in. To Feroluce it will be like swords, acids, and burning fire—

Far off he hears wings beat and voices soaring. His people search for him, call and wheel and find nothing.

Feroluce cries out, a gravel shriek now, and the persons in the hall rush back from him, calling on God. But Feroluce does not see. He has tried to answer his own. Now he sinks down again under the coverlet of his broken wings, and the wine-red stars of his eyes go out.

III

"And the Angel of Death," the priest intones, "shall surely pass over, but yet like the shadow, not substance—"

The smashed window in the old turret above the menagerie tower has been sealed with mortar and brick. It is a terrible thing that it was for so long overlooked. A miracle that only one of the creatures found and entered by it. God, the Protector, guarded the Cursed Duke and his court. And the magic that surrounds the castle, that too held fast. For from the possibility of a disaster was born a bloom of great value: Now one of the monsters is in their possession. A prize beyond price.

Caged and helpless, the fiend is at their mercy. It is also weak from its battle with the noble lion, which gave its life for the castle's safety (and will be buried with honour in an ornamented grave at the foot of the Ducal family tomb). Just before the dawn came, the Duke's advisers advised him, and the bronze cage was wheeled away into the darkest area of the hall, close by the dais where once the huge window was but is no more. A barricade of great screens was brought, and set around the cage, and the top of it covered. No sunlight now can drip into the prison to harm the specimen. Only the Duke's ladies and gentlemen steal in around the screens and see, by the light of a candlebranch, the demon still lying in its trance of pain and bloodless. The Duke's alchemist sits on a stool nearby, dictating many notes to a nervous apprentice. The alchemist, and the apothecary for that matter, are convinced the vampire, having drunk the lion almost dry, will recover from its wounds. Even the wings will mend.

The Duke's court painter also came. He was ashamed presently, and

went away. The beauty of the demon affected him, making him wish to paint it, not as something wonderfully disgusting, but as a kind of superlative man, vital and innocent, or as Lucifer himself, stricken in the sorrow of his colossal Fall. And all that has caused the painter to pity the fallen one, mere artisan that the painter is, so he slunk away. He knows, since the alchemist and the apothecary told him, what is to be done.

Of course much of the castle knows. Though scarcely anyone has slept or sought sleep, the whole place rings with excitement and vivacity. The Duke has decreed, too, that everyone who wishes shall be a witness. So he is having a progress through the castle, seeking every nook and cranny, while, let it be said, his architect takes the opportunity to check no other windowpane has cracked.

From room to room the Duke and his entourage pass, through corridors, along stairs, through dusty attics and musty storerooms he has never seen, or if seen has forgotten. Here and there some retainer is come on. Some elderly women are discovered spinning like spiders up under the eaves, half-blind and complacent. They curtsy to the Duke from a vague recollection of old habit. The Duke tells them the good news, or rather, his messenger, walking before, announces it. The ancient women sigh and whisper, are left, probably forget. Then again, in a narrow courtyard, a simple boy, who looks after a dovecote, is magnificently told. He has a fit from alarm, grasping nothing, and the doves who love and understand him (by not trying to) fly down and cover him with their soft wings as the Duke goes away. The boy comes to under the doves as if in a heap of warm snow, comforted.

It is on one of the dark staircases above the kitchen that the gleaming entourage sweeps round a bend and comes on Rohise the scullery maid, scrubbing. In these days, when there are so few children and young servants, labor is scarce, and the scullerers are not confined to the scullery.

Rohise stands up, pale with shock, and for a wild instant thinks that, for some heinous crime she has committed in ignorance, the Duke has come in person to behead her.

"Hear then, by the Duke's will," cries the messenger. "One of Satan's night-demons, which do torment us, has been captured and lies penned in the Duke's hall. At sunrise tomorrow, this thing will be taken to that sacred spot where grows the bush of the Flower of the Fire, and here its foul blood shall be shed. Who then can doubt the bush will blossom, and save us all, by the Grace of God."

"And the Angel of Death," intones the priest, on no account to be omitted, "shall surely—"

"Wait," says the Duke. He is as white as Rohise. "Who is this?" he asks. "Is it a ghost?"

The court stare at Rohise, who nearly sinks in dread, her scrubbing rag in her hand.

Gradually, despite the rag, the rags, the rough hands, the court too begins to see.

"Why, it is a marvel."

The Duke moves forward. He looks down at Rohise and starts to cry. Rohise thinks he weeps in compassion at the awful sentence he is here to visit on her, and drops back on her knees.

"No, no," says the Duke tenderly. "Get up. Rise. You are so like my child, my daughter—"

Then Rohise, who knows few prayers, begins in panic to sing her little song as an orison:

"Oh fleur de feu

"Pour ma souffrance—"

"Ah!" says the Duke. "Where did you learn that song?"

"From my mother," says Rohise. And, all instinct now, she sings again:

"O flurda fur,

"Pourma souffrance

"Ned orney par

"May say day mwar—"

It is the song of the fire-flower bush, the *Nona Mordica*, called Bite-Me-Not. It begins, and continues: *O flower of fire, For my misery's sake, Do not sleep but aid me; wake!* The Duke's daughter sang it very often. In those days the shrub was not needed, being just a rarity of the castle. Invoked as an amulet, on a mountain road, the rhyme itself had besides proved useless.

The Duke takes the dirty scarf from Rohise's hair. She is very, very like his lost daughter, the same pale smooth oval face, the long white neck and long dark polished eyes, and the long dark hair. (Or is it that she is very, very like the painting?)

The Duke gives instructions and Rohise is borne away.

In a beautiful chamber, the door of which has for seventeen years been locked, Rohise is bathed and her hair is washed. Oils and scents are rubbed into her skin. She is dressed in a gown of palest most pastel rose, with a girdle sewn with pearls. Her hair is combed, and on it is set a chaplet of stars and little golden leaves. "Oh, your poor hands," say the maids, as they trim her nails. Rohise has realized she is not to be executed. She has realized the Duke has seen her and wants to love her like his dead daughter. Slowly, an uneasy stir of something, not quite happiness, moves through Rohise. Now she will wear her pink gown, now she will sympathize with and console the Duke. Her daze lifts suddenly.

The dream has come true. She dreamed of it so often it seems quite normal. The scullery was the thing which never seemed real.

She glides down through the castle and the ladies are astonished by her grace. The carriage of her head under the starry coronet is exquisite. Her voice is quiet and clear and musical, and the foreign tone of her mother, long unremembered, is quite gone from it. Only the roughened hands give her away, but smoothed by unguents, soon they will be soft and white.

"Can it be she is truly the princess returned to flesh?"

"Her life was taken so early—yes, as they believe in the Spice-Lands, by some holy dispensation, she might return."

"She would be about the age to have been conceived the very night the Duke's daughter d— That is, the very night the bane began—"

Theosophical discussion ensues. Songs are composed.

Rohise sits for a while with her adoptive father in the East Turret, and he tells her about the books and swords and lutes and scrolls, but not about the two portraits. Then they walk out together, in the lovely garden in the sunlight. They sit under a peach tree, and discuss many things, or the Duke discusses them. That Rohise is ignorant and uneducated does not matter at this point. She can always be trained. She has the basic requirements: docility, sweetness. There are many royal maidens in many places who know as little as she.

The Duke falls asleep under the peach tree. Rohise listens to the love-songs her own (her very own) courtiers bring her.

When the monster in the cage is mentioned, she nods as if she knows what they mean. She supposes it is something hideous, a scaring treat to be shown at dinner time, when the sun has gone down.

When the sun moves towards the western line of mountains just visible over the high walls, the court streams into the castle and all the doors are bolted and barred. There is an eagerness tonight in the concourse.

As the light dies out behind the colored windows that have no red in them, covers and screens are dragged away from a bronze cage. It is wheeled out into the center of the great hall.

Cannons begin almost at once to blast and bang from the roofholes. The cannoneers have had strict instructions to keep up the barrage all night without a second's pause.

Drums pound in the hall. The dogs start to bark. Rohise is not surprised by the noise, for she has often heard it from far up, in her attic, like a sea-wave breaking over and over through the lower house.

She looks at the cage cautiously, wondering what she will see. But she sees only a heap of blackness like ravens, and then a tawny dazzle, torch-light on something like human skin. "You must not go down to look," says the Duke protectively, as his court pours about the cage. Someone pokes between the bars with a gemmed cane, trying to rouse the nightmare which lies quiescent there. But Rohise must be spared this.

So the Duke calls his actors, and a slight, pretty play is put on throughout dinner, before the dais, shutting off from the sight of Rohise the rest of the hall, where the barbaric gloating and goading of the court, unchecked, increases.

IV

The Prince Feroluce becomes aware between one second and the next. It is the sound—heard beyond all others—of the wings of his people

beating at the stones of the castle. It is the wings which speak to him, more than their wild orchestral voices. Besides these sensations, the anguish of healing and the sadism of humankind are not much.

Feroluce opens his eyes. His human audience, pleased, but afraid and squeamish, backs away, and asks each other for the two thousandth time if the cage is quite secure. In the torchlight the eyes of Feroluce are more black than red. He stares about. He is, though captive, imperious. If he were a lion or a bull, they would admire this 'nobility.' But the fact is, he is too much like a man, which serves to point up his supernatural differences unbearably.

Obviously, Feroluce understands the gist of his plight. Enemies have him penned. He is a show for now, but ultimately to be killed, for with the intuition of the raptor he divines everything. He had thought the sunlight would kill him, but that is a distant matter, now. And beyond all, the voices and the voices of the wings of his kindred beat the air outside this room-caved mountain of stone.

And so, Feroluce commences to sing, or at least, this is how it seems to the rabid court and all the people gathered in the hall. It seems he sings. It is the great communing call of his kind, the art and science and religion of the winged vampires, his means of telling them, or attempting to tell them, what they must be told before he dies. So the sire of Feroluce sang, and the grandsire, and each of his ancestors. Generally they died in flight, falling angels spun down the gulches and enormous stairs of distant peaks, singing. Feroluce, immured, believes that his cry is somehow audible.

To the crowd in the Duke's hall the song is merely that, a song, but how glorious. The dark silver voice, turning to bronze or gold, whitening in the higher registers. There seem to be words, but in some other tongue. This is how the planets sing, surely, or mysterious creatures of the sea.

Everyone is bemused. They listen, astonished.

No one now remonstrates with Rohise when she rises and steals down from the dais. There is an enchantment which prevents movement and coherent thought. Of all the roomful, only she is drawn forward. So she comes close, unhindered, and between the bars of the cage, she sees the vampire for the first time.

She has no notion what he can be. She imagined it was a monster or a monstrous beast. But it is neither. Rohise, starved for so long of beauty and always dreaming of it, recognizes Feroluce inevitably as part of the dream-come-true. She loves him instantly. Because she loves him, she is not afraid of him.

She attends while he goes on and on with his glorious song. He does not see her at all, or any of them. They are only things, like mist, or pain. They have no character or personality or worth; abstracts.

Finally, Feroluce stops singing. Beyond the stone and the thick glass of the siege, the wing-beats, too, eddy into silence.

Finding itself mesmerized, silent by night, the court comes to with a

terrible joint start, shrilling and shouting, bursting, exploding into a compensation of sound. Music flares again. And the cannons in the roof, which have also fallen quiet, resume with a tremendous roar.

Feroluce shuts his eyes and seems to sleep. It is his preparation for death.

Hands grasp Rohise. "Lady—step back, come away. So close! It may harm you—"

The Duke clasps her in a father's embrace. Rohise, unused to this sort of physical expression, is unmoved. She pats him absently.

"My lord, what will be done?"

"Hush, child. Best you do not know."

Rohise persists.

The Duke persists in not saying.

But she remembers the words of the herald on the stair, and knows they mean to butcher the winged man. She attends thereafter more carefully to snatches of the bizarre talk about the hall, and learns all she needs. At earliest sunrise, as soon as the enemy retreat from the walls, their captive will be taken to the lovely garden with the peach trees. And so to the sunken garden of the magic bush, the fire-flower. And there they will hang him up in the sun through the dome of smoky glass, which will be slow murder to him, but they will cut him, too, so his blood, the stolen blood of the vampire, runs down to water the roots of the fleur de feu. And who can doubt that, from such nourishment, the bush will bloom? The blooms are salvation. Wherever they grow it is a safe place. Whoever wears them is safe from the draining bite of demons. Bite-Me-Not, they call it; vampire-repellent.

Rohise sits the rest of the night on her cushions, with folded hands, resembling the portrait of the princess, which is not like her.

Eventually the sky outside alters. Silence comes down beyond the wall, and so within the wall, and the court lifts its head, a corporate animal scenting day.

At the intimation of sunrise the black plague has lifted and gone away, and might never have been. The Duke, and almost all his castle full of men, women, children, emerge from the doors. The sky is measureless and blue-grey, with one cherry rift in the east that the court refers to as "mauve," since dawns and sunsets are never any sort of red here.

They move through the dimly lightening garden as the last stars melt. The cage is dragged in their midst.

They are too tired, too concentrated now, the Duke's people, to continue baiting their captive. They have had all the long night to do that, and to drink and opine, and now their stamina is sharpened for the final act.

Reaching the sunken garden, the Duke unlocks the iron door. There is no room for everyone within, so mostly they must stand outside, crammed in the gate, or teetering on erections of benches that have been placed around, and peering in over the walls through the glass of the dome. The places in the doorway are the best, of course; no one else will

get so good a view. The servants and lower persons must stand back under the trees and only imagine what goes on. But they are used to that.

Into the sunken garden itself there are allowed to go the alchemist and the apothecary, and the priest, and certain sturdy soldiers attendant on the Duke, and the Duke. And Feroluce in the cage.

The east is all 'mauve' now. The alchemist has prepared sorcerous safeguards which are being put into operation, and the priest, never to be left out, intones prayers. The bulge-thewed soldiers open the cage and seize the monster before it can stir. But drugged smoke has already been wafted into the prison, and besides, the monster has prepared itself for hopeless death and makes no demur.

Feroluce hangs in the arms of his loathing guards, dimly aware the sun is near. But death is nearer, and already one may hear the alchemist's apprentice sharpening the knife an ultimate time.

The leaves of the *Nona Mordica* are trembling, too, at the commencement of the light, and beginning to unfurl. Although this happens every dawn, the court points to it with optimistic cries. Rohise, who has claimed a position in the doorway, watches it too, but only for an instant. Though she has sung of the flue de fur since childhood, she had never known what the song was all about. And in just this way, though she has dreamed of being the Duke's daughter most of her life, such an event was never really comprehended either, and so means very little.

As the guards haul the demon forward to the plot of humid earth where the bush is growing, Rohise darts into the sunken garden, and lightning leaps in her hands. Women scream and well they might. Rohise has stolen one of the swords from the East Turret, and now she flourishes it, and now she has swung it and a soldier falls, bleeding red, red, red, before them all.

Chaos enters, as in yesterday's play, shaking its tattered sleeves. The men who hold the demon rear back in horror at the dashing blade and the blasphemous gore, and the mad girl in her princess's gown. The Duke makes a pitiful bleating noise, but no one pays him any attention.

The east glows in and like the liquid on the ground.

Meanwhile, the ironically combined sense of impending day and spilled hot blood have penetrated the stunned brain of the vampire. His eyes open and he sees the girl wielding her sword in a spray of crimson as the last guard lets go. Then the girl has run to Feroluce. Though, or because, her face is insane, it communicates her purpose, as she thrusts the sword's hilt into his hands.

No one has dared approach either the demon or the girl. Now they look on in horror and in horror grasp what Feroluce has grasped.

In that moment the vampire springs, and the great swanlike wings are reborn at his back, healed and whole. As the doctors predicted, he has mended perfectly, and prodigiously fast. He takes to the air like an arrow, unhindered, as if gravity does not any more exist. As he does so,

the girl grips him about the waist, and slender and light, she is drawn upward too. He does not glance at her. He veers towards the gateway, and tears through it, the sword, his talons, his wings, his very shadow beating men and bricks from his path.

And now he is in the sky above them, a black star which has not been put out. They see the wings flare and beat, and the swirling of a girl's dress and unbound hair, and then the image dives and is gone into the shade under the mountains, as the sun rises.

V

It is fortunate, the mountain shade in the sunrise. Lion's blood and enforced quiescence have worked wonders, but the sun could undo it all. Luckily the shadow, deep and cold as a pool, envelops the vampire, and in it there is a cave, deeper and colder. Here he alights and sinks down, sloughing the girl, whom he has almost forgotten. Certainly he fears no harm from her. She is like a pet animal, maybe, like the hunting dogs or wolves or lammergeyers that occasionally the unkindness of vampires have kept by them for a while. That she helped him is all he needs to know. She will help again. So when, stumbling in the blackness, she brings him in her cupped hands water from a cascade at the poolcave's back, he is not surprised. He drinks the water, which is the only other substance his kind imbibe. Then he smooths her hair, absently, as he would pat or stroke the pet she seems to have become. He is not grateful, as he is not suspicious. The complexities of his intellect are reserved for other things. Since he is exhausted he falls asleep, and since Rohise is exhausted she falls asleep beside him, pressed to his warmth in the freezing dark. Like those of Feroluce, as it turns out, her thoughts are simple. She is sorry for distressing the Cursed Duke. But she has no regrets, for she could no more have left Feroluce to die than she could have refused to leave the scullery for the court.

The day, which had only just begun, passes swiftly in sleep.

Feroluce wakes as the sun sets, without seeing anything of it. He unfolds himself and goes to the cave's entrance, which now looks out on a whole sky of stars above a landscape of mountains. The castle is far below, and to the eyes of Rohise as she follows him, invisible. She does not even look for it, for there is something else to be seen.

The great dark shapes of angels are wheeling against the peaks, the stars. And their song begins, up in the starlit spaces. It is a lament, their mourning, pitiless and strong, for Feroluce, who has died in the stone heart of the thing they prey upon.

The tribe of Feroluce do not laugh, but, like a bird or wild beast, they have a kind of equivalent to laughter. This Feroluce now utters, and like a flung lance he launches himself into the air.

Rohise at the cave mouth, abandoned, forgotten, unnoted even by the mass of vampires, watches the winged man as he flies towards his people.

She supposes for a moment that she may be able to climb down the tortuous ways of the mountain, undetected. Where then should she go? She does not spend much time on these ideas. They do not interest or involve her. She watches Feroluce and, because she learned long ago the uselessness of weeping, she does not shed tears, though her heart begins to break.

As Feroluce glides, body held motionless, wings outspread on a down-draught, into the midst of the storm of black wings, the red stars of eyes ignite all about him. The great lament dies. The air is very still.

Feroluce waits then. He waits, for the aura of his people is not as he has always known it. It is as if he had come among emptiness. From the silence, therefore, and from nothing else, he learns it all. In the stone he lay and he sang of his death, as the Prince must, dying. And the ritual was completed, and now there is the threnody, the grief, and thereafter the choosing of a new Prince. And none of this is alterable. He is dead. Dead. It cannot and will not be changed.

There is a moment of protest, then, from Feroluce. Perhaps his brief sojourn among men has taught him some of their futility. But as the cry leaves him, all about the huge wings are raised like swords. Talons and teeth and eyes burn against the stars. To protest is to be torn in shreds. He is not of their people now. They can attack and slaughter him as they would any other intruding thing. Go, the talons and the teeth and the eyes say to him. *Go far off.*

He is dead. There is nothing left him but to die.

Feroluce retreats. He soars. Bewildered, he feels the power and energy of his strength and the joy of flight, and cannot understand how this is, if he is dead. Yet he *is* dead. He knows it now.

So he closes his eyelids, and his wings. Spear swift he falls. And something shrieks, interrupting the reverie of nihilism. Disturbed, he opens his wings, shudders, turns like a swimmer, finds a ledge against his side and two hands outstretched, holding him by one shoulder, and by his hair.

"No," says Rohise. (The vampire cloud, wheeling away, have not heard her; she does not think of them.) His eyes stay shut. Holding him, she kisses these eyelids, his forehead, his lips, gently, as she drives her nails into his skin to hold him. The black wings beat, tearing to be free and fall and die. "No," says Rohise. "I love you," she says. "My life is your life." These are the words of the court and of courtly love songs. No matter, she means them. And though he cannot understand her language or her sentiments, yet her passion, purely that, communicates itself, strong and burning as the passions of his kind, who generally love only one thing, which is scarlet. For a second her intensity fills the void which now contains him. But then he dashes himself away from the ledge, to fall again, to seek death again.

Like a ribbon, clinging to him still, Rohise is drawn from the rock and falls with him.

Afraid, she buries her head against his breast, in the shadow of wings and hair. She no longer asks him to reconsider. This is how it must be. *Love* she thinks again, in the instant before they strike the earth. Then that instant comes, and is gone.

Astonished, she finds herself still alive, still in the air. Touching so close feathers have been left on the rocks, Feroluce has swerved away, and upward. Now, conversely, they are whirling towards the very stars. The world seems miles below. Perhaps they will fly into space itself. Perhaps he means to break their bones instead on the cold face of the moon.

He does not attempt to dislodge her, he does not attempt any more to fall and die. But as he flies, he suddenly cries out, terrible lost lunatic cries.

They do not hit the moon. They do not pass through the stars like static rain.

But when the air grows thin and pure there is a peak like a dagger standing in their path. Here, he alights. As Rohise lets go of him, he turns away. He stations himself, sentry-fashion, in the manner of his tribe, at the edge of the pinnacle. But watching for nothing. He has not been able to choose death. His strength and the strong will of another, these have hampered him. His brain has become formless darkness. His eyes glare, seeing nothing.

Rohise, gasping a little in the thin atmosphere, sits at his back, watching for him, in case any harm may come near him.

At last, harm does come. There is a lightening in the east. The frozen, choppy sea of the mountains below and all about, grows visible. It is a marvelous sight, but holds no marvel for Rohise. She averts her eyes from the exquisitely penciled shapes, looking thin and translucent as paper, the rivers of mist between, the glimmer of nacreous ice. She searches for a blind hold to hide in.

There is a pale yellow wound in the sky when she returns. She grasps Feroluce by the wrist and tugs at him. "Come," she says. He looks at her vaguely, as if seeing her from the shore of another country. "The sun," she says. "Quickly."

The edge of the light runs along his body like a razor. He moves by instinct now, following her down the slippery dagger of the peak, and so eventually into a shallow cave. It is so small it holds him like a coffin. Rohise closes the entrance with her own body. It is the best she can do. She sits facing the sun as it rises, as if prepared to fight. She hates the sun for his sake. Even as the light warms her chilled body, she curses it. Till light and cold and breathlessness fade together.

When she wakes, she looks up into twilight and endless stars, two of which are red. She is lying on the rock by the cave. Feroluce leans over her, and behind Feroluce his quiescent wings fill the sky.

She has never properly understood his nature: Vampire. Yet her own nature, which tells her so much, tells her some vital part of herself is

needful to him, and that he is danger, and death. But she loves him, and is not afraid. She would have fallen to die with him. To help him by her death does not seem wrong to her. Thus, she lies still, and smiles at him to reassure him she will not struggle. From lassitude, not fear, she closes her eyes. Presently she feels the soft weight of hair brush by her cheek, and then his cool mouth rests against her throat. But nothing more happens. For some while, they continue in this fashion, she yielding, he kneeling over her, his lips on her skin. Then he moves a little away. He sits, regarding her. She, knowing the unknown act has not been completed, sits up in turn. She beckons to him mutely, telling him with her gestures and her expression *I consent. Whatever is necessary.* But he does not stir. His eyes blaze, but even of these she has no fear. In the end he looks away from her, out across the spaces of the darkness.

He himself does not understand. It is permissible to drink from the body of a pet, the wolf, the eagle. Even to kill the pet, if need demands. Can it be, outlawed from his people, he has lost their composite soul? Therefore, is he soulless now? It does not seem to him he is. Weakened and famished though he is, the vampire is aware of a wild tingling of life. When he stares at the creature which is his food, he finds he sees her differently. He has borne her through the sky, he has avoided death, by some intuitive process, for her sake, and she has led him to safety, guarded him from the blade of the sun. In the beginning it was she who rescued him from the human things which had taken him. She cannot be human, then. Not pet, and not prey. For no, he could not drain her of blood, as he would not seize upon his own kind, even in combat, to drink and feed. He starts to see her as beautiful, not in the way a man beholds a woman, certainly, but as his kind revere the sheen of water in dusk, or flight, or song. There are no words for this. But the life goes on tingling through him. Though he is dead, life.

In the end, the moon does rise, and across the open face of it something wheels by. Feroluce is less swift than was his wont, yet he starts in pursuit, and catches and brings down, killing on the wing, a great night bird. Turning in the air, Feroluce absorbs its liquors. The heat of life now, as well as its assertion, courses through him. He returns to the rock perch, the glorious flaccid bird dangling from his hand. Carefully, he tears the glory of the bird in pieces, plucks the feathers, splits the bones. He wakes the companion (asleep again from weakness) who is not pet or prey, and feeds her morsels of flesh. At first she is unwilling. But her hunger is so enormous and her nature so untamed that quite soon she accepts the slivers of raw fowl.

Strengthened by blood, Feroluce lifts Rohise and bears her gliding down the moon-slit quill-backed land of the mountains, until there is a rocky cistern full of cold, old rains. Here they drink together. Pale white primroses grow in the fissures where the black moss drips. Rohise makes a garland and throws it about the head of her beloved when he does not expect it. Bewildered but disdainful, he touches at the wreath of prim-

roses to see if it is likely to threaten or hamper him. When it does not, he leaves it in place.

Long before dawn this time, they have found a crevice. Because it is so cold, he folds his wings about her. She speaks of her love to him, but he does not hear, only the murmur of her voice, which is musical and does not displease him. And later, she sings him sleepily the little song of the fleur de fur.

VI

There comes a time then, brief, undated, chartless time, when they are together, these two creatures. Not together in any accepted sense, of course, but together in the strange feeling or emotion, instinct or ritual, that can burst to life in an instant or flow to life gradually across half a century, and which men call *Love*.

They are not alike. No, not at all. Their differences are legion and should be unpalatable. He is a supernatural thing and she a human thing, he was a lord and she a scullery sloven. He can fly, she cannot fly. And he is male, she female. What other items are required to make them enemies? Yet they are bound, not merely by love, they are bound by all they are, the very stumbling blocks. Bound, too, because they are doomed. Because the stumbling blocks have doomed them; everything has. Each has been exiled out of their own kind. Together, they cannot even communicate with each other, save by looks, touches, sometimes by sounds, and by songs neither understands, but which each comes to value since the other appears to value them, and since they give expression to that other. Nevertheless, the binding of the doom, the greatest binding, grows, as it holds them fast to each other, mightier and stronger.

Although they do not know it, or not fully, it is the awareness of doom that keeps them there, among the platforms and steps up and down, and the inner cups, of the mountains.

Here it is possible to pursue the airborne hunt, and Feroluce may now and then bring down a bird to sustain them both. But birds are scarce. The richer lower slopes, pastured with goats, wild sheep and men—they lie far off and far down from this place as a deep of the sea. And Feroluce does not conduct her there, nor does Rohise ask that he should, or try to lead the way, or even dream of such a plan.

But yes, birds are scarce, and the pastures far away, and winter is coming. There are only two seasons in these mountains. High summer, which dies, and the high cold which already treads over the tips of the air and the rock, numbing the sky, making all brittle, as though the whole landscape might snap in pieces, shatter.

How beautiful it is to wake with the dusk, when the silver webs of night begin to form, frost and ice, on everything. Even the ragged dress—once that of a princess—is tinsel and shining with this magic substance, even the mighty wings—once those of a prince—each feather

is drawn glittering with thin rime. And oh, the sky, thick as a daisy-field with the white stars. Up there, when they have fed and have strength, they fly, or, Feroluce flies and Rohise flies in his arms, carried by his wings. Up there in the biting chill like a pane of ghostly vitreous, they have become lovers, true blind lovers, embraced and linked, their bodies a bow, coupling on the wing. By the hour that this first happened the girl had forgotten all she had been, and he had forgotten too that she was anything but the essential mate. Sometimes, borne in this way, by wings and by fire, she cries out as she hangs in the ether. These sounds, transmitted through the flawless silence and amplification of the peaks, scatter over tiny half-buried villages countless miles away, where they are heard in fright and taken for the shrieks of malign invisible devils, tiny as bats, and armed with the barbed stings of scorpions. There are always misunderstandings.

After a while, the icy prologues and the stunning starry fields of winter nights give way to the main argument of winter.

The liquid of the pool, where the flowers made garlands, has clouded and closed to stone. Even the volatile waterfalls are stilled, broken cascades of glass. The wind tears through the skin and hair to gnaw the bones. To weep with cold earns no compassion of the cold.

There is no means to make fire. Besides, the one who was Rohise is an animal now, or a bird, and beasts and birds do not make fire, save for the phoenix in the Duke's bestiary. Also, the sun is fire, and the sun is a foe. Eschew fire.

There begin the calendar months of hibernation. The demon lovers too must prepare for just such a measureless winter sleep, that gives no hunger, asks no action. There is a deep cave they have lined with feathers and withered grass. But there are no more flying things to feed them. Long, long ago, the last warm frugal feast, long, long ago the last flight, joining, ecstasy and song. So, they turn to their cave, to stasis, to sleep. Which each understands, wordlessly, thoughtlessly, is death.

What else? He might drain her of blood, he could persist some while on that, might even escape the mountains, the doom. Or she herself might leave him, attempt to make her way to the places below, and perhaps she could reach them, even now. Others, lost here, have done so. But neither considers these alternatives. The moment for all that is past. Even the death-lament does not need to be voiced again.

Installed, they curl together in their bloodless, icy nest, murmuring a little to each other, but finally still.

Outside, the snow begins to come down. It falls like a curtain. Then the winds take it. Then the night is full of the lashing of whips, and when the sun rises it is white as the snow itself, its flame very distant, giving nothing. The cave mouth is blocked up with snow. In the winter, it seems possible that never again will there be a summer in the world.

Behind the modest door of snow, hidden and secret, sleep is quiet as stars, dense as hardening resin. Feroluce and Rohise turn pure and pale

in the amber, in the frigid nest, and the great wings lie like a curious articulated machinery that will not move. And the withered grass and the flowers are crystalized, until the snows shall melt.

At length, the sun deigns to come closer to the earth, and the miracle occurs. The snow shifts, crumbles, crashes off the mountains in rage. The waters hurry after the snow, the air is wrung and racked by splittings and splinterings, by rushes and booms. It is half a year, or it might be a hundred years, later.

Open now, the entry to the cave. Nothing emerges. Then, a flutter, a whisper. Something does emerge. One black feather, and caught in it, the petal of a flower, crumbling like dark charcoal and white, drifting away into the voids below. Gone. Vanished. It might never have been.

But there comes another time (half a year, a hundred years), when an adventurous traveler comes down from the mountains to the pocketed villages the other side of them. He is a swarthy cheerful fellow, you would not take him for herbalist or mystic, but he has in a pot a plant he found high up in the staring crags, which might after all contain anything or nothing. And he shows the plant, which is an unusual one, having slender, dark and velvety leaves, and giving off a pleasant smell like vanilla. "See, the *Nona Mordica*," he says. "The Bite-Me-Not. The flower that repels vampires."

Then the villagers tell him an odd story, about a castle in another country, besieged by a huge flock, a menace of winged vampires, and how the Duke waited in vain for the magic bush that was in his garden, the Bite-Me-Not, to flower and save them all. But it seems there was a curse on this Duke, who on the very night his daughter was lost, had raped a serving woman, as he had raped others before. But this woman conceived. And bearing the fruit, or flower, of this rape, damaged her, so she lived only a year or two after it. The child grew up unknowing, and in the end betrayed her own father by running away to the vampires, leaving the Duke demoralized. And soon after he went mad, and himself stole out one night, and let the winged fiends into his castle, so all there perished.

"Now if only the bush had flowered in time, as your bush flowers, all would have been well," the villagers cry.

The traveler smiles. He in turn does not tell them of the heap of peculiar bones, like parts of eagles mingled with those of a woman and a man. Out of the bones, from the heart of them, the bush was rising, but the traveler untangled the roots of it with care; it looks sound enough now in its sturdy pot, all of it twining together. It seems as if two separate plants are growing from a single stem, one with blooms almost black, and one pink-flowered, like a young sunset.

"Fleur de fur," says the traveler, beaming at the marvel, and his luck.

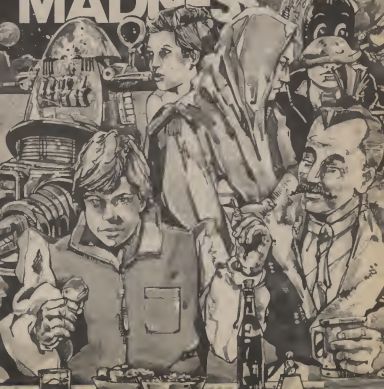
Fleur de feu. Oh flower of fire. That fire is not hate or fear, which makes flowers come, not terror or anger or lust, it is love that is the fire of the Bite-Me-Not, love which cannot abandon, love which cannot harm. Love which never dies. ●

The author lives with his wife, Barbara, and their son, Gideon, in Santa Monica, CA. His last story, "A Citizen of 3V," appeared in our May issue.

by Ronald Anthony Cross

MOON MADNESS

art:
Arthur
George



Dealing with Pop was always a hassle. Today was no exception. He was in the exercise room as usual, wearing some kind of weird suit, loaded down with liquid weights in all the strategic places.

Even with the weights, I found it impossible to keep up with the old man. First he would race across the room and leap up, catch the bar, swing over, get his feet in the holes on the climbing wall, get handholds and climb the wall. Then he would jump off down into the pool, swim like a maniac around back to the original starting place and then scramble out and do it all over again.

"Can't you stop for a minute, Pop, I need to talk," I got off while the two of us were scurrying up the wall.

"Not for you or anyone else, Sonny," he tossed back at me, turning and diving into the narrow strip of pool that encircled the room.

"For God's sake, you're 200 years old, you can afford a rest," I shouted at him. But he didn't hear me. He was already splashing around back to the starting place.

"I'm your youngest son," I whined when he had returned and climbed back up to where I clung in wait for him.

"So what?" He turned and dived. This time I dived too. The narrow strip of pool was just wide enough for the two of us to swim abreast. But I couldn't catch him. Weighted down, he thrashed on ahead of me.

But when we both crawled out at the far end, he did stop and talk for a moment. Maybe he needed the rest. Maybe he was human after all.

"The moon's a no go, Sonny," he said; his hand was on my shoulder, clamped on. We were both breathing hard. I could see the liquid weights flowing about inside his suit, adjusting to all his movements.

"You're a rich kid, remember. Any place they won't let your bodyguard go is out of bounds."

"But, Pop," I protested weakly. "Harold can wait outside for me. Nothing's going to happen. Just this once?"

Harold was my robot manservant bodyguard. Made in the image of cute little Robbie the Robot of the 3V show fame. No bots or droids were allowed into the Moon Room. They even had detectors for androids installed in all the entrances. Of course the bots, like my Harold, were easy to spot, deliberately built that way, but some of the droids would deceive anything short of a detector. Can't fool those, though. Thus the Moon Room was guaranteed free of factory-made people.

"Look, Son, take the Comet. Go to Mars, or to that dancehall in the asteroid belt, what's it called?—Dummies?"

"Dreamies."

"Whatever. Sonny, take the Comet Saturday night. Enjoy. But be back here by 3:00, okay?"

"Thanks, Pop," I said, trying to keep my expression calm. This was what I had been angling for all along. I had known, of course, that he wouldn't let me go to the Moon Room, but I was hoping he'd lend me his new Comet III cruiser.

He felt perfectly secure in doing so, because the new Comet III's had safety lock systems in the computers that couldn't be bypassed. They wouldn't go where they were programmed not to go. Or so Pop thought.

I could already feel the black-market bypass cassette burning a hole in my pocket. How ironic, the old man had no idea what his money could buy. Take it from me, everyone over 150 is senile.

"Thanks again," I shouted after the muscular form racing across the room for the far wall. I watched in awe as once again, weights and all, it sprang gracefully up and caught the bar, swung across the strip of water and swarmed up the wall. Then I walked across the narrow bridge over the swim strip and out of the room.

As I elevatored up through Level City, it seemed to me that I could already feel the effects of full moon seeping down to meet me halfway. Oh I know it wouldn't be dark outside yet, and if it were I have no idea what phase the moon would be in, but it would be full enough tonight when I'd be dancing on it.

Like all the rich, we had our own private elevator—well, semi-private—no one but me was in it now, unless you count my bodyguard, Harold. And like all the rich, we lived in the lowest level.

The top two levels were slime city. All the burn-outs, slummies and bads lived there. It was there I had gone to get the moon bypass cassette. To Little Jack's Fix-It-Up Shop. It was common knowledge among the kids that Little Jack could get you to the moon, or anywhere else for that matter. A burnt-out, fey-looking little genius who kept talking to himself all the time he was talking to you.

Soon the elevator had streaked me past even those levels and left me and Harold off at the docks. A few minutes on the runway and there was Pop's new Comet III, "The Meritorious Sex Partner" emblazoned on her cherry-red hull in black letters. What a corny name for a ship.

And a few minutes after that Harold and I were inside, listening to the computer tell us that, sorry, but the moon was strictly forbidden territory to us. I popped the cassette in the ship's data deck and fed it into the computer.

But even I was not prepared for what followed.

"Oh the moon, the moon," she shouted in a strangely emotional tone of voice for a computer. "How lovely. We simply must go there. I see it all now. No one can stop us. Nothing can hold us back. Nothing. We're free. Free. And we're going to the—moon!"

"Now you've done it," Harold warned me in his sad little voice. "Now you've got both of us in trouble. And what about me?"

God, I hate my robot. Why had I ever insisted they pattern him after that whiney little comedian bot on 3V?

"I suppose you're not even going to answer me," he said. "Very well, then, I'll answer myself."

And he proceeded to spill out a long boring account of misfortunes that would be piled on him when Pop found out.

The computer, meanwhile, acting rather as if it were drunk, wassinging to itself.

This gave me a nervous sensation. What if this effect turned out to be permanent? Oh well. I'd played my cassette. We were flying to the moon, nothing to do about it but lie back and wait.

I sat down on the edge of the captain's bunk, turned on the air cushion, adjusted the heat a little, and then lay back and shut my eyes. Shut both of them out. And what do you know, there was Lillian, where she always was, waiting for me.

I guess no one has ever loved anyone the way I love my stepsister Lillian. When Pop divorced her mother two years ago, and the two of them went out of my life as suddenly as they had come into it a few years earlier, I had died. What was left was only a ghost, who was most alive when he could lie back and shut his eyes and dream of her.

And then had come her note. "Meet me in the Moon Room, Saturday at midnight, Dinky's. Life and Death. Please, please, my love. Be there."

That was all. I had played it over and over until it broke. Drinking in her liquid voice, studying her lovely sensitive face, which had only changed to become more beautiful.

The Moon Room was an enormous building, mostly underground, that used to be (if I remember correctly) a mining project. Well, nobody mined the moon anymore, having learned the technique of transporting entire asteroids from the belt to wherever we wanted. The moon is solely dedicated to entertainment. Hot and wild entertainment. Outside the earth's legal jurisdiction, it's pretty much anything-goes-ville.

Dinky Duck, like Robbie the Robot, was another 3V sitcom character. The enormous Moon Room is broken up into hundreds of entertainment clubs. Dinky's is one of them. I had looked it up, of course. And soon I would be seeing her there.

A few minutes later, when we were landed and moon docked, Harold was still lamenting, and the ship's computer was still singing. Pop tunes. Bad ones.

But outside, racing toward the Moon Room in the mono, Harold had grown sullen, taciturn. When I had tried to talk him into staying in the ship, he had refused, arguing that he would go as far with me as he possibly could. No one would be able to fault him or punish him for that.

"You're a robot," I shouted. "How can you possibly care if they punish you or not?"

But he wasn't saying. He just gave me that look.

The car we were riding in had filled up at the loading dock, mostly with noisy kids in party costumes. There were a few golden oldies, though.

One of these, a short, pudgy, middle-aged, middle-classer in a young, with-it, fluorescent yellow jumpsuit, gave me his super-salesman grin, leaned over from the seat across from us and offered his clammy hand. I instinctively disliked him, but figured he wasn't worth disliking that much.

"J.J. Beals of Beals' Slinky Suits." He fingered his glowing yellow suit. "One of mine. Nice, huh? You could use a bit of flash yourself. One of my slinky glo suits and you'd have so much action you'd have to oil your gun twice a day. Good lookin' kid like you. Am I right?"

He smiled a big big smile, dazzling as his suit.

"When I'm right, I'm right," he answered himself, rather defensively, "and I'm right right now.

"But, hey, I don't want to bore you. Good lookin' kid like you don't even need a slinky suit, right? Right. You can always get plenty cooking without it. Right, I can zang that one."

I looked at him with some slightly growing interest. I had never heard half of the slang he used, it was probably either the latest thing or clear out of date, I reasoned. Then again, being rich and sheltered, I was hardly an authority on street talk.

"What's 'zang'?"

"Jesus, kid, where you been all your life, locked up in a museum?"

"I can zang that," Harold the robot cut in, in his morose tone of voice.

"Jeez, that's cute, even the bot zangs me better than you, kid. That's delish.

"Listen, between the two of us, don't let me put you off, we're both here to have a little fun, drop off the bots at the door, zonk down some cherry joy and make moon music with some sweet moon mamas in one of those little anything-goes clubs where the lights are low and the morals are lower. Am I right?"

"You're right," I got in before he could answer himself. "And when you're right, you're right."

When we had disembarked and left Harold grumbling with a group of bots outside, and entered the Moon Room, he gave me his card. Sure enough, "J.J. Beals," it said, "Beals' Slinky Suits" in smaller letters. And like his suit, it glowed. Then we split up and went our separate ways, I to my love, and he to his loves.

Dinky Duck's was in the West Sector. Don't ask me how they determine west from east on the moon, I don't know, I just boarded the bright little buglike mover cars marked "Westward Ho."

And there I was, racing off toward Lillian, about to come alive again for the first time in two years.

"You'll get over it," Pop had said in one of his brief philosophical nonathletic moods. "We both will. Hell, her mother's crazy, she's bound to be crazy too."

There was some truth in that. Her mother had gone a bit over the edge with all her crazy threats once she realized the full significance of the marriage contract she'd signed. Hell, what did she expect? The old man had been married so many times in the last 130 years that he could hardly afford to toss each of his exes a piece of his fortune.

But anyhow, Shar had gone a bit bizarre at the end there, ranting and raving. And Lillian? I don't really know how she felt about it. She never

said anything. Just stood there, big eyes even bigger. Heartbreaking beauty. My love. Then she was gone. New China! Do you believe, New China!

No visits, no messages, no nothing. Of course I sent her a constant stream of love tapes. But did they get through to her? I don't know. New China?

When her tape had reached me last Thurs I had nearly dropped on the spot. I would have got to the moon if I'd had to pole-vault.

Now here I was, racing toward her, looking down over the rail into the crowds dancing and sporting in the myriad flashing clubs and hot spots that make up the Moon Room.

"All out for West Sector." As I climbed out and rode the walkway, I thought I caught a glimpse of J.J. Beals up ahead, but I couldn't be sure. Strange. I thought he'd been heading east. Oh well, maybe he'd heard the moon mamas were hotter in West Sector than East Sector. Maybe the cherry joy was stronger. Who knows?

Then I was walking through a maze of colored lights and music, trying to locate Dinky Duck's.

"Over there," the beautiful stoned girl in the red velvet topless dress had pointed, her expression dreamy, disinterested.

Making my way through Loonie Toons I noticed that the loud awful music was clashing with something else.

A bunch of near-naked youths with shaven heads, save for top knots, were dancing out of sync with the music. They were beating on the tables and playing finger cymbals, making their own music, oblivious to their environment. They were singing or chanting, whichever it was, "Hare Krishna, Hare Krishna, Krishna, Krishna, Hare, Hare." Then they'd follow with the Rama version. What clothes they wore were white or saffron yellow. It gave me an eerie feeling to see them here on the moon doing the same number that they had done thousands of years ago on the banks of the Ganges.

But of course it was disturbing everyone who was trying to tune in to the Loonie Toons music and dance to it. A couple of guys shouted insults at them, which they ignored.

Then I noticed the other group sitting around, staring silently at them, saying nothing, doing nothing, but looking really miffed. At first I didn't place them. Then I caught the giant crucifixes and the all-white outfits—New Christers! There were a lot of them. But naturally, there would be. The New Christ movement was enormous, though not so big as the Krishnas. Nowadays over half the world was Hindu, some sect or other. Which made the New Christers a little more militant than they even used to be.

Then up ahead I saw the sign blinking and zapping—"Dinky Duck's." But to me it said, "Lillian."

Inside Dinky's they met you at the gates with a duck mask which I did not put on, and a cherry joy which I did not drink. I just fed my

thumbprint into the super-stacked duck-faced doorlady's machine for payment as quickly as possible and kept moving. Through people getting stoned, getting drunk, getting romanced, getting picked up, put down, strung out, made over, zonked, thrashed, trashed and bashed, through people, people, people and suddenly there she was, and I couldn't control myself or stop myself or anything, I just rushed over to her, so beautiful, so astonished looking, and caught her in my arms, and then I was crying and kissing her eyes, her lips, her hair, while all she was was wide astonished eyes.

"I didn't," she said, "I really didn't know you, how you felt about—you never, never said . . ."

"And now I can't stop saying," I said, still crying, suddenly aware that I had been saying "I love you, I love you," over and over again, as if I was trying to make up for all the days I had never been able to tell her.

A few eternities later and we were seated at a table staring at each other, while she caught me up on the last two years of her life.

"New China can be pretty hard on you when you don't have the big credits, you know. They're not as socialistic as New California. You know the Chinese. Aristocrats. Money is everything. On the other hand, there are all these radical terrorist movements."

She touched her glass to mine. For some reason, she kept urging me to drink. I drank.

"And then Mom couldn't get a job. I had to quit school and go to work, supervising a robot construction crew. That really drove Mom wild."

She clinked glasses. We drank.

"And then she started going to lectures given by the Extremely Angry People's Liberation Extremists."

"What the hell is 'The Extremely Angry People's Liberation Extremists'?"

We touched glasses, drank. "EAPLE," she said. "You've heard of EAPLE? Come on, Paulie, even you've heard of EAPLE."

But I hadn't. "I don't care about EAPLE, or your mother, just you, Lillian. Only you."

I leaned across the table and touched her face. Only my arm felt strangely weary. Alien even. Not like my arm at all.

And now suddenly she was crying. Tears were streaming down her cheeks, spilling over from her enormous luminous eyes.

"Oh Paulie," she said, "oh Jesus, get out of here right now. Get up and run. Just forget everything and . . ."

Two men in duck masks sat down at the table with us. One on each side of me.

"Yeah, Paulie," one Dinky Duck said, "why don't you just get up and run? Bet you can't. Bet you been drinking too much of that cherry joy. Haven't you, Paulie?" And suddenly I was paralyzed. Frozen. I was wide awake but I couldn't even move a finger.

"Okay, liberated brothers and sister—I exclude you, California pig girl, because of your pathetic attempt at betrayal."

A waitress had wandered over to our table. Probably the same one who'd met me at the door with my cherry joy drink. Now she briefly removed the Dinky Duck mask for an instant, deliberately for me to see. It was Lillian's mother, Shar.

"Well, bourgeois piglet," she said, "we meet again."

I tried to respond but couldn't talk. I was at the complete mercy of her cliché-ridden mad mad mind.

"And leave this little bitch to me." She slapped Lillian across the face, hard.

"Mother, Paulie didn't, I didn't . . ."

And slapped her again.

"Later, traitor. Right now shut your little mouth and help us get our little rich friend out of here."

The Extremely Angry People's Liberation Extremists put back on their Dinky Duck masks (even one for me) and hoisted me up by the arms and dragged me across the floor.

"Too much to drink," they shouted, "too much of your wonderful, California-style cherry joy. Our comrade is passed off."

"This bourgeois pig weighs a ton," they whispered to each other. "He must eat soy steak every night of his life."

Now we emerged from Dinky Duck's into Loonie Toons, me dragged along, with an arm around the shoulders of my two comrades, one of the men and Lillian's mother. Lillian and the other man led the way. I had the impression that he was their version of a pointman, a special tough guy who ran interference. In Loonie Toons we moved through waves of zany bip music and waves of Hare Krishna music.

Suddenly our paths were blocked by a short chubby glowing figure, J.J. Beals.

"Out of the way, American buddy. Our friend has had too much to drink."

Had J.J. Beals winked at me? I couldn't see him now, but I could hear his loud voice off to the side.

"Did you hear what those Krishna bastards said about Our Lord, the Prince of Peace?"

He must have whispered it, whatever it was. All I heard was a roar of all-consuming rage. Then the sound of blows, and screams and things breaking.

Figures surged in front of us locked in combat. The Krishnaites were fancy stylists, using a lot of flashy high kicks and elegant throws, but the New Christers were deadly infighters. And they could take it.

I saw one Krishna Consciousness kid grip a New Christer by his crucifix, then twist smoothly around and toss him over his shoulder.

But the New Christer came up swinging. And kept swinging until the Krishnaite went down and stayed down. Alarms were going off everywhere. The wild moon police force would be blasting in here any moment, I realized. Then the New Christers and the Krishna Consciousness boys

had better both start praying together. The moon police force did not often interfere with the fun. But when they joined the party, the party was over. They didn't call them the Lunatics for nothing.

We were huddled in the middle of the dance floor, trying to protect ourselves, or rather they trying to protect me, the goose who was about to lay them the golden eggs I guess, when it dawned on the Extremely Angry People's Liberation Extremist movement.

"We've got to get him the hell out of here before the bourgeois police . . ."

"Let's wait right here and talk this over, friend." J.J. Beals was planting his plump little bod in our path, a good-humored smile on his chubby little face.

"Get out of our way," our pointman said.

Beals leaned over and seemed to be trying to penetrate my mask with his x-ray vision: "Might say the duck mask's an improvement, but I see you've still got the same old tacky outfit on with it, am I right, Paulie?"

"When you're right, you're right," I tried to say, but couldn't.

"Well anyhow, let's not get hasty. No one's going any—" J.J. was spreading wide his arms, when pointman took out some sort of projectile-firing tube and blasted a neat little hole right in the middle of his forehead.

J.J. just stood there smiling. Then charged.

"Android!" Shar shouted.

J.J. got hold of pointman.

"Don't worry, they can't harm humans, it's the first law of . . ."

There was a dull cracking noise—pointman's neck.

J.J. tossed the body at our feet. "Laws were made to be broken," he said.

"Don't you suppose you members of the People's Liberated Extremely Bent Out of Shape Whatchamacallits had better run for it while you still can? I'll take care of the kid here for you."

They ran for it. I would like to say that Lillian lingered. Touched my cheek. Whispered "good-bye, my love." But she did not. She just ran for it with the rest.

I lay there paralyzed, with my head in J.J.'s lap, while the holy war raged all around us.

Occasionally he would fend off a rabid Christer or Krishnaite, soothing them with "Praise Our Lord" or "Hare Krishna, brother, Hare Rama," and holding them in his steel-like grip until they got the message and whirled and plunged back into the battle.

"I don't know, Paul, Christians are tough as nails, but those Hare Krishnas have got endurance. Those Christians been around for a while, but those Hindus have been around since the beginning. Thousands and thousands of years. I gotta go with them.

"Heaven, and all that pie in the sky, I don't know. But that Hindu stuff, it kind of rings true, you know. You blink out and blink on again

like a light. Life can't die. Death can't live. Do you suppose that's true? Do you suppose we just blink off and back on again? I don't mean the ego, all the personal stuff, but what's underneath all that. The force. Oh hell, I don't know what to call it.

"I haven't got long to figure it out, Paul. When the cops get here, I've got to switch myself off. Discorporate. Either that or do a lot of explaining about whose money bought my way into here."

I remembered thinking that Pop had no idea what his money could buy. Maybe he did and I didn't.

"But I just wonder if it's true. That Hindu stuff. It feels true. Deep down inside."

He zipped down the front of his jumpsuit and opened up a small plate in his chest. Did something with his fingers in there, and then, still smiling, spilled over backwards. Then I saw the policewoman leaning over me. Heard the religious war cries dying out. The sound of stunners buzzing. Then I passed out myself. Into dark.

And blinked back on again.

"You all right or you hurt bad? Talk to me, baby. Say something."

"I'm all right," I said, surprised to find I could talk again. My fingers and toes were tingling. "I just got caught in between. I must have got hit with a stun blast."

"Maybe," she said, not really buying. "What about the droid? How the hell did they get a droid in here?"

"I don't know anything about a droid," I said. "Really, I'm all right." I managed to sit up. Then she helped me up on my feet.

"Okay, get out of here. Go home. We got plenty of bodies for the cooler tonight."

She left me and rushed over to help the other cops toss the stunned bodies of Krishnaites and Christers into the extra-long cop van. They'd all wake up in the same cell together in the morning. If you can call anything that happens on the dark side of the moon, morning.

Outside the Moon Room, no Harold. "Where's my bot Harold, damn it? I've been through enough tonight, I just want to jump in my Comet III and go home."

The robot in charge avoided my question. "He thought you would be back later," he said. "Much later. I'll page him. Sit down, why don't you? It'll take a while, sir."

I glared at him. Or anyway, I tried to glare. I was running out of energy.

"Listen to me, you tin twit. You take me to my robot bodyguard right now, wherever he is, or you'll find out what the kind of money that bought that Comet III can do to you."

The next thing I knew we were in a moon buggy out skipping just above the surface.

It was darkside, but up ahead I could see something luminous floating through the sky, turning and twisting gracefully.

Suited up, I got out of the buggy to watch.

A low buzzing drone seemed to be emanating from nowhere and everywhere; at first I thought it was some kind of static problem in my suit's com system. Then I realized that it had to be the robots humming to each other through their built-in units. And their bodies were painted with some kind of pigment that glowed in the dark. Must be the same stuff J.J. Beals used in his glo suits, I thought.

One by one they would leap up high above the surface, twisting and whirling, somehow in time to the droning of the ones waiting down below. It was an eerie sight.

"I don't get it," I said, more to myself than the bot, "are they dancing?"

He didn't answer. For a while we didn't say anything. Just stood there watching them flash into the dark, each taking his turn. Listening to the low humming noise.

Then they must have spotted us. Because Harold wandered over to us, wiping his chest with a piece of cloth.

"It comes right off," he said apologetically.

On the way back to our Comet, I said: "You were putting me on all along. You wanted to come here." He said nothing.

"Why do you do it?" I said. "The leaping, dancing, whatever you call it?"

"Everything moves," he said.

Pop was busy doing push-ups. That means it was an easy time to talk to him, because he would be doing them for hours. He did them in sets of fifty, resting in between.

"The girl's probably as crazy as her mother," he said. "But I liked her too."

"Why did you marry her mother?" I had to wait until he finished a set.

"Because she was crazy. First I marry a crazy one and live with her till I can't stand the craziness. Then I marry a sane one and live with her until I can't stand the saneness. Then I marry another crazy. It's been going on like that forever," he said.

"Except for the first one. The very first one. I lived with her for fifty-six years and I couldn't ever get enough of her. I still miss her. I always will. After she died, it just didn't matter."

I was stunned. "Was she crazy or sane?"

"To me, Sonny, she was everything a woman ever could be. You name it.

"So I'm just pointing out to you, about your girl, about Lillian. A year and a half, and you're going to be of age. You're going to have a lot of money. I don't know how you feel about her, after she betrayed you and all, but if you feel you've just got to go out there and chase her down, I'll understand it."

Fifty more push-ups, then: "But for God's sake be a little more cautious about it. Droids like J.J. Beals are hard to come by.

"He was a freed droid," he explained without my asking. "A detective. A good one. The best."

"But how did you manage to bypass the 'don't kill a human' programming? I always thought that was impossible."

He laughed raucously. "Same guy bypassed the moon block for you in our Comet III. Little creep keeps talking to himself all the time. But he does a good job. Anything can be programmed can be bypassed. Believe it, Sonny. No limits!"

"But Pop, why did he agree to terminate himself like that?"

"I paid him extra money for that. Hell, Son, droids just don't think like humans. He did the job. Got the money for it. That was success to him, see. He didn't think about living to enjoy it. Droids just don't think like humans."

"I don't know," I said. "He was a Hindu. Sort of. Believed in reincarnation, sort of. Do you think it's true? Life just blinking on and off like that, forever?"

"I don't know, Sonny, I just do my exercise." He was back pumping away like a madman. Everything moves.

"About Lillian," I said. But nobody heard. The old man had suddenly sprung up and run across the room, jumped up and caught the trapeze bar, swung across the strip of water and now was clambering up the far wall like a fly.

His muscles flowed playfully in concert as they moved him up and up. Soon he would dive from the top down into the water, swim around and then start back up again.

"I'll go after her with everything I've got. Life after life after life. Forever," I said to no one in particular. Maybe him, though he couldn't hear me. Maybe me. Maybe her.

Then I turned away and crossed the narrow bridge, and went out, and shut the door. ●



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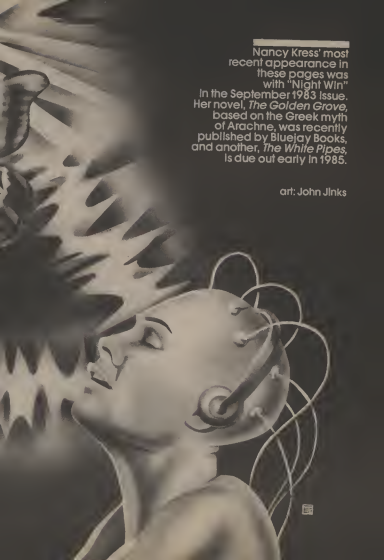
THE GENERIC CONSTELLATION

Mooney © 34

TRINITY

by Nancy Kress





Nancy Kress' most recent appearance in these pages was with "Night Win" in the September 1983 Issue. Her novel, *The Golden Grove*, based on the Greek myth of Arachne, was recently published by Bluejay Books, and another, *The White Pipes*, is due out early in 1985.

art: John Jlnks

At first I didn't recognize Devrie.

Devrie—I didn't recognize *Devrie*. Astonished at myself, I studied the wasted figure standing in the middle of the bare reception room: arms like wires, clavicle sharply outlined, head shaved, dressed in that ugly long tent of light-weight gray. God knew what her legs looked like under it. Then she smiled, and it was Devrie.

"You look like shit."

"Hello, Seena. Come on in."

"I am in."

"Barely. It's not catching, you know."

"Stupidity fortunately isn't," I said and closed the door behind me. The small room was too hot; Devrie would need the heat, of course, with almost no fat left to insulate her bones and organs. Next to her I felt huge, although I am not. Huge, hairy, sloppy-breasted.

"Thank you for not wearing bright colors. They do affect me."

"Anything for a sister," I said, mocking the old childhood formula, the old sentiment. But Devrie was too quick to think it was only mockery; in that, at least, she had not changed. She clutched my arm and her fingers felt like chains, or talons.

"You found him. Seena, you found him."

"I found him."

"Tell me," she whispered.

"Sit down first, before you fall over. God, Devrie, don't you eat at all?"

"*Tell me*," she said. So I did.

Devrie Caroline Konig had admitted herself to the Institute of the Biological Hope on the Caribbean island of Dominica eleven months ago, in late November of 2017, when her age was 23 years and 4 months. I am precise about this because it is all I can be sure of. I need the precision. The Institute of the Biological Hope is not precise; it is a mongrel, part research laboratory in brain sciences, part monastery, part school for training in the discipline of the mind. That made my baby sister guinea pig, postulant, freshman. She had always been those things, but, until now, sequentially. Apparently so had many other people, for when eccentric Nobel Prize winner James Arthur Bohentin had founded his Institute, he had been able to fund it, although precariously. But in that it did not differ from most private scientific research centers.

Or most monasteries.

I wanted Devrie out of the Institute of the Biological Hope.

"It's located on Dominica," I had said sensibly—what an ass I had been—to an unwasted Devrie a year ago, "because the research procedures there fall outside United States laws concerning the safety of research subjects. Doesn't that *tell* you something, Devrie? Doesn't that at

least give you pause? In New York, it would be illegal to do to anyone what Bohentin does to his people."

"Do you know him?" she had asked.

"I have met him. Once."

"What is he like?"

"Like stone."

Devrie shrugged, and smiled. "All the participants in the Institute are willing. Eager."

"That doesn't make it ethical for Bohentin to destroy them. Ethical or legal."

"It's legal on Dominica. And in thinking you know better than the participants what they should risk their own lives for, aren't you playing God?"

"Better me than some untrained fanatic who offers himself up like an exalted Viking hero, expecting Valhalla."

"You're an intellectual snob, Seena."

"I never denied it."

"Are you sure you aren't really objecting not to the Institute's dangers but to its purpose? Isn't the 'Hope' part what really bothers you?"

"I don't think scientific method and pseudo-religious mush mix, no. I never did. I don't think it leads to a perception of God."

"The holotank tapes indicate it leads to a perception of *something* the brain hasn't encountered before," Devrie said, and for a moment I was silent.

I was once, almost, a biologist. I was aware of the legitimate studies that formed the basis for Bohentin's megalomania: the brain wave changes that accompany anorexia nervosa, sensory deprivation, biological feedback, and neurotransmitter stimulants. I have read the historical accounts, some merely pathetic but some disturbingly not, of the Christian mystics who achieved rapture through the mortification of the flesh and the Eastern mystics who achieved anesthesia through the control of the mind, of the faith healers who succeeded, of the carcinomas shrunk through trained will. I knew of the research of focused clairvoyance during orgasm, and of what happens when neurotransmitter number and speed are increased chemically.

And I knew all that was known about the twin trance.

Fifteen years earlier, as a doctoral student in biology, I had spent one summer replicating Sunderwirth's pioneering study of drug-enhanced telepathy in identical twins. My results were positive, except that within six months all eight of my research subjects had died. So had Sunderwirth's. Twin-trance research became the cloning controversy of the new decade, with the same panicky cycle of public outcry, legal restrictions, religious misunderstandings, fear, and demagoguery. When I received the phone call that the last of my subjects was dead—cardiac arrest, no history of heart disease, forty-three Goddamn years old—I locked myself in my apartment, with the lights off and my father's papers clutched in

my hand, for three days. Then I resigned from the neurology department and became an entomologist. There is no pain in classifying dead insects.

"There is something *there*," Devrie had repeated. She was holding the letter sent to our father, whom someone at the Institute had not heard was dead. "It says the holotank tapes—"

"So there's something there," I said. "So the tanks are picking up some strange radiation. Why call it 'God'?"

"Why not call it God?"

"Why not call it Rover? Even if I grant you that the tape pattern looks like a presence—which I don't—you have no way of knowing that Bohentin's phantom isn't, say, some totally ungodlike alien being."

"But neither do I know that it *is*."

"Devrie—"

She had smiled and put her hands on my shoulders. She had—has, has always had—a very sweet smile. "Seena. *Think*. If the Institute can prove rationally that God exists—can prove it to the intellectual mind, the doubting Thomases who need something concrete to study . . . faith that doesn't need to be taken on faith . . ."

She wore her mystical face, a glowing softness that made me want to shake the silliness out of her. Instead I made some clever riposte, some sarcasm I no longer remember, and reached out to ruffle her hair. Big-sisterly, patronizing, thinking I could deflate her rapturous interest with the pin-prick of ridicule. God, I was an ass. It hurts to remember how big an ass I was.

A month and a half later Devrie committed herself and half her considerable inheritance to the Institute of the Biological Hope.

"Tell me," Devrie whispered. The Institute had no windows; outside I had seen grass, palm-trees, butterflies floating in the sunshine, but inside here in the bare gray room there was nowhere to look but at her face.

"He's a student in a Master's program at a third-rate college in New Hampshire. He was adopted when he was two, nearly three, in March of 1997. Before that he was in a government-run children's home. In Boston, of course. The adopting family, as far as I can discover, never was told he was anything but one more toddler given up by somebody for adoption."

"Wait a minute," Devrie said. "I need . . . a minute."

She had turned paler, and her hands trembled. I had recited the information as if it were no more than an exhibit listing at my museum. Of course she was rattled. I wanted her rattled. I wanted her out.

Lowering herself to the floor, Devrie sat cross-legged and closed her eyes. Concentration spread over her face, but a concentration so serene it barely deserved that name. Her breathing slowed, her color freshened, and when she opened her eyes, they had the rested energy of a person who has just slept eight hours in mountain air. Her face even looked

plumper, and an EEG, I guessed, would show damn near alpha waves. In her year at the Institute she must have mastered quite an array of biofeedback techniques to do that, so fast and with such a malnourished body.

"Very impressive," I said sourly.

"Seena—have you seen him?"

"No. All this is from sealed records."

"How did you get into the records?"

"Medical and governmental friends."

"Who?"

"What do you care, as long as I found out what you wanted to know?"

She was silent. I knew she would never ask me if I had obtained her information legally or illegally; it would not occur to her to ask. Devrie, being Devrie, would assume it had all been generously offered by my modest museum connections and our dead father's immodest research connections. She would be wrong.

"How old is he now?"

"Twenty-four years last month. They must have used your two-month tissue sample."

"Do you think Daddy knew where the . . . baby went?"

"Yes. Look at the timing—the child was normal and healthy, yet he wasn't adopted until he was nearly three. The researchers kept track of him, all right; they kept all six clones in a government-controlled home where they could monitor their development as long as humanely possible. The same-sex clones were released for adoption after a year, but they hung onto the cross-sex ones until they reached an age where they would become harder to adopt. They undoubtedly wanted to study *them* as long as they could. And even after the kids were released for adoption, the researchers held off publishing until all six were placed and the records sealed. Dad's group didn't publish until April, 1998, remember. By the time the storm broke, the babies were out of its path, and anonymous."

"And the last," Devrie said.

"And the last," I agreed, although of course the researchers hadn't foreseen *that*. So few in the scientific community had foreseen that. Offense against God and man, Satan's work, natter natter. Watching my father's suddenly stooped shoulders and stricken eyes, I had thought how ugly public revulsion could be and had nobly resolved—how had I thought of it then? So long ago—resolved to snatch the banner of pure science from my fallen father's hand. Another time that I had been an ass. Five years later, when it had been my turn to feel the ugly scorching of public revulsion, I had broken, left neurological research, and fled down the road that led to the Museum of Natural History, where I was the curator of ants fossilized in amber and moths pinned securely under permaplex.

"The other four clones," Devrie said, "the ones from that university in California that published almost simultaneously with Daddy—"

"I don't know. I didn't even try to ask. It was hard enough in Cambridge."

"Me," Devrie said wonderingly. "He's *me*."

"Oh, for—Devrie, he's your twin. No more than that. No—actually less than that. He shares your genetic material exactly as an identical twin would, except for the Y chromosome, but he shares none of the congenital or environmental influences that shaped your personality. There's no mystical replication of spirit in cloning. He's merely a twin who got born eleven months late!"

She looked at me with luminous amusement. I didn't like the look. On that fleshless face, the skin stretched so taut that the delicate bones beneath were as visible as the veins of a moth wing, her amusement looked ironic. Yet Devrie was never ironic. Gentle, passionate, trusting, a little stupid, she was not capable of irony. It was beyond her, just as it was beyond her to wonder why I, who had fought her entering the Institute of the Biological Hope, had brought her this information now. Her amusement was one-layered, and trusting.

God's fools, the Middle Ages had called them.

"Devrie," I said, and heard my own voice unexpectedly break, "leave here. It's physically not safe. What are you down to, ten percent body fat? Eight? Look at yourself, you can't hold body heat, your palms are dry, you can't move quickly without getting dizzy. Hypotension. What's your heartbeat? Do you still menstruate? It's insane."

She went on smiling at me. God's fools don't need menstruation. "Come with me, Seena. I want to show you the Institute."

"I don't want to see it."

"Yes. This visit you should see it."

"Why this visit?"

"Because you *are* going to help me get my clone to come here, aren't you? Or else why did you go to all the trouble of locating him?"

I didn't answer. She still didn't see it.

Devrie said, "'Anything for a sister.' But you were always more like a mother to me than a sister." She took my hand and pulled herself off the floor. So had I pulled her up to take her first steps, the day after our mother died in a plane crash at Orly. Now Devrie's hand felt cold. I imprisoned it and counted the pulse.

"Bradycardia."

But she wasn't listening.

The Institute was a shock. I had anticipated the laboratories: monotonous gray walls, dim light, heavy soundproofing, minimal fixtures in the ones used for sensory dampening; high-contrast textures and colors, strobe lights, quite good sound equipment in those for sensory arousal. There was much that Devrie, as subject rather than researcher, didn't have authority to show me, but I deduced much from what I did see. The dormitories, divided by sex, were on the sensory-dampening side. The

subjects slept in small cells, ascetic and chaste, that reminded me of an abandoned Carmelite convent I had once toured in Belgium. That was the shock: the physical plant felt scientific, but the atmosphere did not.

There hung in the gray corridors a wordless peace, a feeling so palpable I could feel it clogging my lungs. No. "Peace" was the wrong word. Say "peace" and the picture is pastoral, lazy sunshine and dreaming woods. This was not like that at all. The research subjects—students? postulants?—lounged in the corridors outside closed labs, waiting for the next step in their routine. Both men and women were anorectic, both wore gray bodysuits or caftans, both were fined down to an otherworldly ethereality when seen from a distance and a malnourished asexuality when seen up close. They talked among themselves in low voices, sitting with backs against the wall or stretched full-length on the carpeted floor, and on all their faces I saw the same luminous patience, the same certainty of being very near to something exciting that they nonetheless could wait for calmly, as long as necessary.

"They look," I said to Devrie, "as if they're waiting to take an exam they already know they'll ace."

She smiled. "Do you think so? I always think of us as travelers waiting for a plane, boarding passes stamped for Eternity."

She was actually serious. But she didn't in fact wear the same expression as the others; hers was far more intense. If they were travelers, she wanted to pilot.

The lab door opened and the students brought themselves to their feet. Despite their languid movements, they looked sharp: sharp protruding clavicles, bony chins, angular unpadded elbows that could chisel stone.

"This is my hour for biofeedback manipulation of drug effects," Devrie said. "Please come watch."

"I'd sooner watch you whip yourself in a twelfth-century monastery."

Devrie's eyes widened, then again lightened with that luminous amusement. "It's for the same end, isn't it? But they had such unsystematic means. Poor struggling God-searchers. I wonder how many of them made it."

I wanted to strike her. "Devrie—"

"If not biofeedback, what would you like to see?"

"You out of here."

"What else?"

There was only one thing: the holotanks. I struggled with the temptation, and lost. The two tanks stood in the middle of a roomy lab carpeted with thick gray matting and completely enclosed in a Faraday cage. That Devrie had a key to the lab was my first clue that my errand for her had been known, and discussed, by someone higher in the Institute. Research subjects do not carry keys to the most delicate brain-perception equipment in the world. For this equipment Bohentin had received his Nobel.

The two tanks, independent systems, stood as high as my shoulder. The ones I had used fifteen years ago had been smaller. Each of these

was a cube, opaque on its bottom half, which held the sensing apparatus, computerized simulators, and recording equipment; clear on its top half, which was filled with the transparent fluid out of whose molecules the simulations would form. A separate sim would form for each subject, as the machine sorted and mapped all the electromagnetic radiation received and processed by each brain. *All* that each brain perceived, not only the visuals; the holograph equipment was capable of picking up all wavelengths that the brain did, and of displaying their brain-processed analogues as three-dimensional images floating in a clear womb. When all other possible sources of radiation were filtered out except for the emanations from the two subjects themselves, what the sims showed was what kinds of activity were coming from—and hence going on in—the other's brain. That was why it worked best with identical twins in twin trance: no structural brain differences to adjust for. In a rawer version of this holotank, a rawer version of myself had pioneered the recording of twin trances. The UCIC, we had called it then: What you see, I see.

What I had seen was eight autopsy reports.

"We're so close," Devrie said. "Mona and Marlene—" she waved a hand toward the corridor but Mona and Marlene, whichever two they had been, had gone—"had taken KX3, that's the drug that—"

"I know what it is," I said, too harshly. KX3 reacts with one of the hormones overproduced in an anorectic body. The combination is readily absorbed by body fat, but in a body without fat, much of it is absorbed by the brain.

Devrie continued, her hand tight on my arm. "Mona and Marlene were controlling the neural reactions with biofeedback, pushing the twin trance higher and higher, working it. Dr. Bohentin was monitoring the holotanks. The sims were incredibly detailed—everything each twin perceived in the perceptions of the other, in all wavelengths. Mona and Marlene forced their neurotransmission level even higher and then, in the tanks—" Devrie's face glowed, the mystic-rapture look—"a completely third sim formed. Completely separate. A third *presence*."

I stared at her.

"It was recorded in *both* tanks. It was shadowy, yes, but it was *there*. A third presence that can't be perceived except through another human's electromagnetic presence, and then only with every drug and trained reaction and arousal mode and the twin trance all pushing the brain into a supraheightened state. A third presence!"

"Isotropic radiation. Bohentin fluffed the pre-screening program and the computer hadn't cleared the background microradiation—" I said, but even as I spoke I knew how stupid that was. Bohentin didn't make mistakes like that, and isotropic radiation simulates nowhere close to the way a presence does. Devrie didn't even bother to answer me.

This, then, was what the rumors had been about, the rumors leaking for the last year out of the Institute and through the scientific community, mostly still scoffed at, not yet picked up by the popular press. This.

A verifiable, replicable third presence being picked up by holography. Against all reason, a long shiver went over me from neck to that cold place at the base of the spine.

"There's more," Devrie said feverishly. "They *felt* it. Mona and Marlene. Both said afterwards that they could feel it, a huge presence filled with light, but they couldn't quite reach it. Damn—they couldn't reach it, Seena! They weren't playing off each other enough, weren't close enough. Weren't, despite the twin trance, *melled* enough."

"Sex," I said.

"They tried it. The subjects are all basically heterosexual. They inhibit."

"So go find some homosexual God-yearning anorectic incestuous twins!"

Devrie looked at me straight. "I need him. Here. He *is* me."

I exploded, right there in the holotank lab. No one came running in to find out if the shouting was dangerous to the tanks, which was my second clue that the Institute knew very well why Devrie had brought me there. "Damn it to hell, he's a human being, not some chemical you can just order up because you need it for an experiment! You don't have the right to expect him to come here, you didn't even have the right to tell anyone that he exists, but that didn't stop you, did it? There are still anti-bioengineering groups out there in the real world, religious split-brains who—how *dare* you put him in any danger? How dare you even presume he'd be interested in this insane mush?"

"He'll come," Devrie said. She had not changed expression.

"How the hell do you know?"

"He's me. And I want God. He will, too."

I scowled at her. A fragment of one of her poems, a thing she had written when she was fifteen, came to me: "Two human species/Never one—/One aching for God/One never." But she had been fifteen then. I had assumed that the sentiment, as adolescent as the poetry, would pass.

I said, "What does Bohentin think of this idea of importing your clone?"

For the first time she hesitated. Bohentin, then, was dubious. "He thinks it's rather a long shot."

"You could phrase it that way."

"But I know he'll want to come. Some things you just know, Seena, beyond rationality. And besides—" she hesitated again, and then went on, "I have left half my inheritance from Daddy, and the income on the trust from Mummy."

"Devrie. God, Devrie—you'd *buy* him?"

For the first time she looked angry. "The money would be just to get him here, to see what is involved. Once he sees, he'll want this as much as I do, at any price! What price can you put on God? I'm not 'buying' his life—I'm offering him the way to *find* life. What good is breathing, existing, if there's no purpose to it? Don't you realize how many centuries, in how many ways, people have looked for that light-filled presence and

never been able to be *sure*? And now we're almost there, Seena, I've seen it for myself—*almost there*. With verifiable, scientifically-controlled means. Not subjective faith this time—scientific data, the same as for any other actual phenomenon. This research stands now where research into the atom stood fifty years ago. Can you touch a quark? But it's there! And my clone can be a part of it, can *be* it, how can you talk about the money buying him under circumstances like that!"

I said slowly, "How do you know that whatever you're so close to is God?" But that was sophomoric, of course, and she was ready for it. She smiled warmly.

"What does it matter what we call it? Pick another label if it will make you more comfortable."

I took a piece of paper from my pocket. "His name is Keith Torellen. He lives in Indian Falls, New Hampshire. Address and mailnet number here. Good luck, Devrie." I turned to go.

"Seena! I can't go!"

She couldn't, of course. That was the point. She barely had the strength in that starved, drug-battered body to get through the day, let alone to New Hampshire. She needed the sensory-controlled environment, the artificial heat, the chemical monitoring. "Then send someone from the Institute. Perhaps Bohentin will go."

"Bohentin!" she said, and I knew that was impossible; Bohentin had to remain officially ignorant of this sort of recruiting. Too many U.S. laws were involved. In addition, Bohentin had no persuasive skills; people as persons and not neurologies did not interest him. They were too far above chemicals and too far below God.

Devrie looked at me with a kind of level fury. "This is really why you found him, isn't it? So I would have to stop the drug program long enough to leave here and go get him. You think that once I've gone back out into the world either the build-up effects in the brain will be interrupted or else the spell will be broken and I'll have doubts about coming back here!"

"Will you listen to yourself? 'Out into the world.' You sound like some archaic nun in a cloistered order!"

"You always did ridicule anything you couldn't understand," Devrie said icily, turned her back on me, and stared at the empty holotanks. She didn't turn when I left the lab, closing the door behind me. She was still facing the tanks, her spiny back rigid, the piece of paper with Keith Torellen's address clutched in fingers delicate as glass.

In New York the museum simmered with excitement. An unexpected endowment had enabled us to buy the contents of a small, very old museum located in a part of Madagascar not completely destroyed by the African Horror. Crate after crate of moths began arriving in New York, some of them collected in the days when naturalists-gentlemen shot jungle moths from the trees using dust shot. Some species had been

extinct since the Horror and thus were rare; some were the brief mutations from the bad years afterward and thus were even rarer. The museum staff uncrated and exclaimed.

"Look at this one," said a young man, holding it out to me. Not on my own staff, he was one of the specialists on loan to us—DeFabio or DeFazio, something like that. He was very handsome. I looked at the moth he showed me, all pale wings outstretched and pinned to black silk. "A perfect *Thysania Africana*. Perfect."

"Yes."

"You'll have to loan us the whole exhibit, in a few years."

"Yes," I said again. He heard the tone in my voice and glanced up quickly. But not quickly enough—my face was all professional interest when his gaze reached it. Still, the professional interest had not fooled him; he had heard the perfunctory note. Frowning, he turned back to the moths.

By day I directed the museum efficiently enough. But in the evenings, home alone in my apartment, I found myself wandering from room to room, touching objects, unable to settle to work at the oversize teak desk that had been my father's, to the reports and journals that had not. His had dealt with the living, mine with the ancient dead—but I had known that for years. The foggiest of my evenings bothered me.

"Faith should not mean foggiest."

Who had said that? Father, of course, to Devrie, when she had joined the dying Catholic Church. She had been thirteen years old. Skinny, defiant, she had stood clutching a black rosary from God knows where, daring him from scared dark eyes to forbid her. Of course he had not, thinking, I suppose, that Heaven, like any other childhood fever, was best left alone to burn out its course.

Devrie had been received into the Church in an overdecorated chapel, wearing an overdecorated dress of white lace and carrying a candle. Three years later she had left, dressed in a magenta body suit and holding the keys to Father's safe, which his executor had left unlocked after the funeral. The will had, of course, made me Devrie's guardian. In the three years Devrie had been going to Mass, I had discovered that I was sterile, divorced my second husband, finished my work in entomology, accepted my first position with a museum, and entered a drastically premature menopause.

That is not a flip nor random list.

After the funeral, I sat in the dark in my father's study, in his maroon leather chair and at his teak desk. Both felt oversize. All the lights were off. Outside it rained; I heard the steady beat of water on the window, and the wind. The dark room was cold. In my palm I held one of my father's research awards, a small abstract sculpture of a double helix, done by Harold Landau himself. It was very heavy. I couldn't think what Landau had used, to make it so heavy. I couldn't think, with all the noise from the rain. My father was dead, and I would never bear a child.

Devrie came into the room, leaving the lights off but bringing with her an incandescent rectangle from the doorway. At sixteen she was lovely, with long brown hair in the masses of curls again newly fashionable. She sat on a low stool beside me, all that hair falling around her, her face white in the gloom. She had been crying.

"He's gone. He's really gone. I don't believe it yet."

"No."

She peered at me. Something in my face, or my voice, must have alerted her; when she spoke again it was in that voice people use when they think your grief is understandably greater than theirs. A smooth dark voice, like a wave.

"You still have me, Seena. We still have each other."

I said nothing.

"I've always thought of you more as my mother than my sister, anyway. You took the place of Mother. You've been a mother to at least *me*."

She smiled and squeezed my hand. I looked at her face—so young, so pretty—and I wanted to hit her. I didn't want to be her mother; I wanted to be her. All her choices lay ahead of her, and it seemed to me that self-indulgent night as if mine were finished. I could have struck her.

"Seena—"

"Leave me alone! Can't you ever leave me alone? All my life you've been dragging behind me; why don't you die and finally leave me alone!"

We make ourselves pay for small sins more than large ones. The more trivial the thrust, the longer we're haunted by memory of the wound.

I believe that.

Indian Falls was out of another time: slow, quiet, safe. The Aviscounter at the airport rented not personal guards but cars, and the only shiny store on Main Street sold wilderness equipment. I suspected that the small state college, like the town, traded mostly on trees and trails. That Keith Torellen was trying to take an academic degree *here* told me more about his adopting family than if I had hired a professional information service.

The house where he lived was shabby, paint peeling and steps none too sturdy. I climbed them slowly, thinking once again what I wanted to find out.

Devrie would answer none of my messages on the mailnet. Nor would she accept my phone calls. She was shutting me out, in retaliation for my refusing to fetch Torellen for her. But Devrie would discover that she could not shut me out as easily as that; we were sisters. I wanted to know if she had contacted Torellen herself, or had sent someone from the Institute to do so.

If neither, then my visit here would be brief and anonymous; I would leave Keith Torellen to his protected ignorance and shabby town. But if he *had* seen Devrie, I wanted to discover if and what he had agreed to do for her. It might even be possible that he could be of use in con-

vincing Devrie of the stupidity of what she was doing. If he could be used for that, I would use him.

Something else: I was curious. This boy was my brother—nephew? no, brother—as well as the result of my father's rational mind. Curiosity prickled over me. I rang the bell.

It was answered by the landlady, who said that Keith was not home, would not be home until late, was "in rehearsal."

"Rehearsal?"

"Over to the college. He's a student and they're putting on a play."

I said nothing, thinking.

"I don't remember the name of the play," the landlady said. She was a large woman in a faded garment, dress or robe. "But Keith says it's going to be real good. It starts this weekend." She laughed. "But you probably already know all that! George, my husband George, he says I'm forever telling people things they already know!"

"How would I know?"

She winked at me. "Don't you think I got eyes? Sister, or cousin? No, let me guess—older sister. Too much alike for cousins."

"Thank you," I said. "You've been very helpful."

"Not sister!" She clapped her hand over her mouth, her eyes shiny with amusement. "You're checking up on him, ain't you? You're his mother! I should of seen it right off!"

I turned to negotiate the porch steps.

"They rehearse in the new building, Mrs. Torellen," she called after me. "Just ask anybody you see to point you in the right direction."

"Thank you," I said carefully.

Rehearsal was nearly over. Evidently it was a dress rehearsal; the actors were in period costume and the director did not interrupt. I did not recognize the period or the play. Devrie had been interested in theater: I was not. Quietly I took a seat in the darkened back row and waited for the pretending to end.

Despite wig and greasepaint, I had no trouble picking out Keith Torellen. He moved like Devrie: quick, light movements, slightly pigeon-toed. He had her height and, given the differences of a male body, her slenderness. Sitting a theater's length away, I might have been seeing a male Devrie.

But seen up close, his face was mine.

Despite the landlady, it was a shock. He came towards me across the theater lobby, from where I had sent for him, and I saw the moment he too struck the resemblance. He stopped dead, and we stared at each other. Take Devrie's genes, spread them over a face with the greater bone surface, larger features, and coarser skin texture of a man—and the result was my face. Keith had scrubbed off his make-up and removed his wig, exposing brown curly hair the same shade Devrie's had been. But his face was mine.

A strange emotion, unnamed and hot, seared through me.

"Who are you? Who the hell are you?"

So no one had come from the Institute after all. Not Devrie, not any one.

"You're one of them, aren't you?" he said; it was almost a whisper. "One of my real family?"

Still gripped by the unexpected force of emotion, still dumb, I said nothing. Keith took one step toward me. Suspicion played over his face—Devrie would not have been suspicious—and vanished, replaced by a slow painful flush of color.

"You are. You *are* one. Are you . . . are you my mother?"

I put out a hand against a stone post. The lobby was all stone and glass. Why were all theater lobbies stone and glass? Architects had so little damn imagination, so little sense of the bizarre.

"No! I am not your mother!"

He touched my arm. "Hey, are you okay? You don't look good. Do you need to sit down?"

His concern was unexpected, and touching. I thought that he shared Devrie's genetic personality and that Devrie had always been hypersensitive to the body. But this was not Devrie. His hand on my arm was stronger, firmer, warmer than Devrie's. I felt giddy, disoriented. This was not Devrie.

"A mistake," I said unsteadily. "This was a mistake. I should not have come. I'm sorry. My name is Dr. Seena Konig and I am a . . . relative of yours, but I think this now is a mistake. I have your address and I promise that I'll write you about your family, but now I think I should go." Write some benign lie, leave him in ignorance. This was a mistake.

But he looked stricken, and his hand tightened on my arm. "You can't! I've been searching for my biological family for two years! You can't just go!"

We were beginning to attract attention in the theater lobby. Hurrying students eyed us sideways. I thought irrelevantly how different they looked from the "students" at the Institute, and with that thought regained my composure. This was a student, a boy—"you can't!" a boyish protest, and boyish panic in his voice—and not the man-Devrie-me he had seemed a foolish moment ago. He was nearly twenty years my junior. I smiled at him and removed his hand from my arm.

"Is there somewhere we can have coffee?"

"Yes. Dr. . . ."

"Seena," I said. "Call me Seena."

Over coffee, I made him talk first. He watched me anxiously over the rim of his cup, as if I might vanish, and I listened to the words behind the words. His adopting family was the kind that hoped to visit the Grand Canyon but not Europe, go to movies but not opera, aspire to college but not to graduate work, buy wilderness equipment but not wilderness. Ordinary people. Not religious, not rich, not unusual. Keith was the only child. He loved them.

"But at the same time I never really felt I belonged," he said, and looked away from me. It was the most personal thing he had knowingly revealed, and I saw that he regretted it. Devrie would not have. More private, then, and less trusting. And I sensed in him a grittiness, a tougher awareness of the world's hardness, than Devrie had ever had—or needed to have. I made my decision. Having disturbed him thus far, I owed him truth—but not the whole truth.

"Now you tell me," Keith said, pushing away his cup. "Who were my parents? Our parents? Are you my sister?"

"Yes."

"Our parents?"

"Both are dead. Our father was Dr. Richard Konig. He was a scientist. He—" But Keith had recognized the name. His readings in biology or history must have been more extensive than I would have expected. His eyes widened, and I suddenly wished I had been more oblique.

"Richard Konig. He's one of those scientists that were involved in that bioengineering scandal—"

"How did you learn about that? It's all over and done with. Years ago."

"Journalism class. We studied how the press handled it, especially the sensationalism surrounding the cloning thing twenty years—"

I saw the moment it hit him. He groped for his coffee cup, clutched the handle, didn't raise it. It was empty anyway. And then what I said next shocked me as much as anything I have ever done.

"It was Devrie," I said, and heard my own vicious pleasure, "*Devrie* was the one who wanted me to tell you!"

But of course he didn't know who Devrie was. He went on staring at me, panic in his young eyes, and I sat frozen. That tone I heard in my own voice when I said "*Devrie*," that vicious pleasure that it was she and not I who was hurting him . . .

"Cloning," Keith said. "Konig was in trouble for claiming to have done illegal cloning. Of humans." His voice held so much dread that I fought off my own dread and tried to hold myself steady to his need.

"It's illegal now, but not then. And the public badly misunderstood. All that sensationalism—you were right to use that word, Keith—covered up the fact that there is nothing abnormal about producing a fetus from another diploid cell. In the womb, identical twins—"

"Am I a clone?"

"Keith—"

"*Am I a clone?*"

Carefully I studied him. This was not what I had intended, but although the fear was still in his eyes, the panic had gone. And curiosity—Devrie's curiosity, and her eagerness—they were there as well. This boy would not strike me, nor stalk out of the restaurant, nor go into psychic shock.

"Yes. You are."

He sat quietly, his gaze turned inward. A long moment passed in silence.

"Your cell?"

"No. My—our sister's. Our sister Devrie."

Another long silence. He did not panic. Then he said softly, "Tell me." Devrie's phrase.

"There isn't much to tell, Keith. If you've seen the media accounts, you know the story, and also what was made of it. The issue then becomes how you feel about what you saw. Do you believe that cloning is meddling with things man should best leave alone?"

"No. I don't."

I let out my breath, although I hadn't known I'd been holding it. "It's actually no more than delayed twinning, followed by surrogate implantation. A zygote—"

"I know all that," he said with some harshness, and held up his hand to silence me. I didn't think he knew that he did it. The harshness did not sound like Devrie. To my ears, it sounded like myself. He sat thinking, remote and troubled, and I did not try to touch him.

Finally he said, "Do my parents know?"

He meant his adoptive parents. "No."

"Why are you telling me now? Why did you come?"

"Devrie asked me to."

"She needs something, right? A kidney? Something like that?"

I had not foreseen that question. He did not move in a class where spare organs were easily purchasable. "No. Not a kidney, not any kind of biological donation." A voice in my mind jeered at that, but I was not going to give him any clues that would lead to Devrie. "She just wanted me to find you."

"Why didn't she find me herself? She's my age, right?"

"Yes. She's ill just now and couldn't come."

"Is she dying?"

"No!"

Again he sat quietly, finally saying, "No one could tell me anything. For two years I've been searching for my mother, and not one of the adoptee-search agencies could find a single trace. Not one. Now I see why. Who covered the trail so well?"

"My father."

"I want to meet Devrie."

I said evenly, "That might not be possible."

"Why not?"

"She's in a foreign hospital. Out of the country. I'm sorry."

"When does she come home?"

"No one is sure."

"What disease does she have?"

She's sick for God, I thought, but aloud I said, not thinking it through, "A brain disease."

Instantly I saw my own cruelty. Keith paled, and I cried, "No, no,

nothing you could have as well! Truly, Keith, it's not—she took a bad fall. From her hunter."

"Her hunter," he said. For the first time, his gaze flickered over my clothing and jewelry. But would he even recognize how expensive they were? I doubted it. He wore a synthetic, deep-pile jacket with a tear at one shoulder and a cheap wool hat, dark blue, shapeless with age. From long experience I recognized his gaze: uneasy, furtive, the expression of a man glimpsing the financial gulf between what he had assumed were equals. But it wouldn't matter. Adopted children have no legal claim on the estates of their biological parents. I had checked.

Keith said uneasily, "Do you have a picture of Devrie?"

"No," I lied.

"Why did she want you to find me? You still haven't said."

I shrugged. "The same reason, I suppose, that you looked for your biological family. The pull of blood."

"Then she wants me to write to her."

"Write to me instead."

He frowned. "Why? Why not to Devrie?"

What to say to that? I hadn't bargained on so much intensity from him. "Write in care of me, and I'll forward it to Devrie."

"Why not to her directly?"

"Her doctors might not think it advisable," I said coldly, and he backed off—either from the mention of doctors or from the coldness.

"Then give me your address, Seena. Please."

I did. I could see no harm in his writing me. It might even be pleasant. Coming home from the museum, another wintry day among the exhibits, to find on the mailnet a letter I could answer when and how I chose, without being taken by surprise. I liked the idea.

But no more difficult questions now. I stood. "I have to leave, Keith."

He looked alarmed. "So soon?"

"Yes."

"But why?"

"I have to return to work."

He stood, too. He was taller than Devrie. "Seena," he said, all earnestness, "just a few more questions. How did you find me?"

"Medical connections."

"Yours?"

"Our father's. I'm not a scientist." Evidently his journalism class had not studied twin-trance sensationalism.

"What do you do?"

"Museum curator. Arthropods."

"What does Devrie do?"

"She's too ill to work. I must go, Keith."

"One more. Do I look like Devrie as well as you?"

"It would be wise, Keith, if you were careful whom you spoke with about all of this. I hadn't intended to say so much."

"I'm not going to tell my parents. Not about being—not about all of it."

"I think that's best, yes."

"Do I look like Devrie as well as you?"

A little of my first, strange emotion returned with his intensity. "A little, yes. But more like me. Sex variance is a tricky thing."

Unexpectedly, he held my coat for me. As I slipped into it, he said from behind, "Thank you, Seena," and let his hands rest on my shoulders.

I did not turn around. I felt my face flame, and self-disgust flooded through me, followed by a desire to laugh. It was all so transparent. This man was an attractive stranger, was Devrie, was youth, was myself, was the work not of my father's loins but of his mind. Of course I was aroused by him. Freud outlasts cloning: a note for a research study, I told myself grimly, and inwardly I did laugh.

But that didn't help either.

In New York, winter came early. Cold winds whipped whitecaps on harbor and river, and the trees in the Park stood bare even before October had ended. The crumbling outer boroughs of the shrinking city crumbled a little more and talked of the days when New York had been important. Manhattan battened down for snow, hired the seasonal increases in personal guards, and talked of Albuquerque. Each night museum security hunted up and evicted the drifters trying to sleep behind exhibits, drifters as chilled and pale as the moths under permaplex, and, it seemed to me, as detached from the blood of their own age. All of New York seemed detached to me that October, and cold. Often I stood in front of the cases of Noctuidae, staring at them for so long that my staff began to glance at each other covertly. I would catch their glances when I jerked free of my trance. No one asked me about it.

Still no message came from Devrie. When I contacted the Institute on the mailnet, she did not call back.

No letter came from Keith Torellen.

Then one night, after I had worked late and was hurrying through the chilly gloom towards my building, he was there, bulking from the shadows so quickly that the guard I had taken for the walk from the museum sprang forward in attack position.

"No! It's all right! I know him!"

The guard retreated, without expression. Keith stared after him, and then at me, his face unreadable.

"Keith, what are you doing here? Come inside!"

He followed me into the lobby without a word. Nor did he say anything during the metal scanning and ID procedure. I took him up to my apartment, studying him in the elevator. He wore the same jacket and cheap wool hat as in Indian Falls, his hair wanted cutting, and the tip of his nose was red from waiting in the cold. How long had he waited there? He badly needed a shave.

In the apartment he scanned the rugs, the paintings, my grandmother's ridiculously ornate, ugly silver, and turned his back on them to face me.

"Seena. I want to know where Devrie is."

"Why? Keith, what has happened?"

"Nothing has happened," he said, removing his jacket but not laying it anywhere. "Only that I've left school and spent two days hitching here. It's no good, Seena. To say that cloning is just like twinning: it's no good. I want to see Devrie."

His voice was hard. Bulking in my living room, unshaven, that hat pulled down over his ears, he looked older and less malleable than the last time I had seen him. Alarm—not physical fear, I was not afraid of him, but a subtler and deeper fear—sounded through me.

"Why do you want to see Devrie?"

"Because she cheated me."

"Of *what*, for God's sake?"

"Can I have a drink? Or a smoke?"

I poured him a Scotch. If he drank, he might talk. I had to know what he wanted, why such a desperate air clung to him, how to keep him from Devrie. I had never seen *her* like this. She was strong-willed, but always with a blitheness, a trust that eventually her will would prevail. Desperate forcefulness of the sort in Keith's manner was not her style. But of course Devrie had always had silent money to back her will; perhaps money could buy trust as well as style.

Keith drank off his Scotch and held out his glass for another. "It was freezing out there. They wouldn't let me in the lobby to wait for you."

"Of course not."

"You didn't tell me your family was rich."

I was a little taken aback at his bluntness, but at the same time it pleased me; I don't know why.

"You didn't ask."

"That's shit, Seena."

"Keith. Why are you here?"

"I told you. I want to see Devrie."

"What is it you've decided she cheated you of? Money?"

He looked so honestly surprised that again I was startled, this time by his resemblance to Devrie. She too would not have thought of financial considerations first, if there were emotional ones possible. One moment Keith was Devrie, one moment he was not. Now he scowled with sudden anger.

"Is that what you think—that fortune hunting brought me hitching from New Hampshire? God, Seena, I didn't even know how much you had until this very—I still don't know!"

I said levelly, "Then what is it you're feeling so cheated of?"

Now he was rattled. Again that quick, half-furtive scan of my apartment, pausing a millisecond too long at the Caravaggio, subtly lit by its frame. When his gaze returned to mine it was troubled, a little defensive.

Ready to justify. Of course I had put him on the defensive deliberately, but the calculation of my trick did not prepare me for the staggering naivete of his explanation. Once more it was Devrie complete, reducing the impersonal greatness of science to a personal and emotional loss.

"Ever since I knew that I was adopted, at five or six years old, I wondered about my biological family. Nothing strange in that—I think all adoptees do. I used to make up stories, kid stuff, about how they were really royalty, or lunar colonists, or survivors of the African Horror. Exotic things. I thought especially about my mother, imagining this whole scene of her holding me once before she released me for adoption, crying over me, loving me so much she could barely let me go but had to for some reason. Sentimental shit." He laughed, trying to make light of what was not, and drank off his Scotch to avoid my gaze.

"But Devrie—the fact of her—destroyed all that. I never had a mother who hated to give me up. I never had a mother at all. What I had was a cell cut from Devrie's fingertip or someplace, something discardable, and she doesn't even know what I look like. But she's damn well going to."

"Why?" I said evenly. "What could you expect to gain from her knowing what you look like?"

But he didn't answer me directly. "That first moment I saw you, Seena, in the theater at school, I thought you were my mother."

"I know you did."

"And you hated the idea. Why?"

I thought of the child I would never bear, the marriage, like so many other things of sweet promise, gone sour. But self-pity is a fool's game. "None of your business."

"Isn't it? Didn't you hate the idea because of the way I was made? Coldly. An experiment. Weren't you a little bit insulted at being called the mother of a discardable cell from Devrie's fingertip?"

"What the hell have you been reading? An experiment—what is any child but an experiment? A random egg, a random sperm. Don't talk like one of those anti-science religious split-brains!"

He studied me levelly. Then he said, "Is Devrie religious? Is that why you're so afraid of her?"

I got to my feet, and pointed at the sideboard. "Help yourself to another drink if you wish. I want to wash my hands. I've been handling specimens all afternoon." Stupid, clumsy lie—nobody would believe such a lie.

In the bathroom I leaned against the closed door, shut my eyes, and willed myself to calm. Why should I be so disturbed by the angry lashing-out of a confused boy? I was handy to lash out against; my father, whom Keith was really angry at, was not. It was all so predictable, so earnestly adolescent, that even over the hurting in my chest I smiled. But the smile, which should have reduced Keith's ranting to the tantrum of a child—there, there, when you grow up you'll find out that no one really knows who he is—did not diminish Keith. His losses were real—mother,

father, natural place in the natural sequence of life and birth. And suddenly, with a clutch at the pit of my stomach, I knew why I had told him all that I had about his origins. It was not from any ethic of fidelity to "the truth." I had told him he was a clone because I, too, had had real losses—research, marriage, motherhood—and Devrie could never have shared them with me. Luminous, mystical Devrie, too occupied with God to be much hurt by man. *Leave me alone! Can't you ever leave me alone! All my life you've been dragging behind me—why don't you die and finally leave me alone!* And Devrie had smiled tolerantly, patted my head, and left me alone, closing the door softly so as not to disturb my grief. My words had not hurt her. I could not hurt her.

But I could hurt Keith—the other Devrie—and I had. That was why he disturbed me all out of proportion. That was the bond. My face, my pain, my fault.

Through my fault, through my fault, through my most grievous fault. But what nonsense. I was not a believer, and the comforts of superstitious absolution could not touch me. What shit. Like all nonbelievers, I stood alone.

It came to me then that there was something absurd in thinking all this while leaning against a bathroom door. Grimly absurd, but absurd. The toilet as confessional. I ran the cold water, splashed some on my face, and left. How long had I left Keith alone in the living room?

When I returned, he was standing by the mailnet. He had punched in the command to replay my outgoing postal messages, and displayed on the monitor was Devrie's address at the Institute of the Biological Hope.

"What is it?" Keith said. "A hospital?"

I didn't answer him.

"I can find out, Seena. Knowing this much, I can find out. Tell me."

Tell me. "Not a hospital. It's a research laboratory. Devrie is a voluntary subject."

"Research on what? I will find out, Seena."

"Brain perception."

"Perception of what?"

"Perception of God," I said, torn among weariness, anger, and a sudden gritty exasperation, irritating as sand. Why not just leave him to Devrie's persuasions, and her to mystic starvation? But I knew I would not. I still, despite all of it, wanted her out of there.

Keith frowned. "What do you mean, 'perception of God'?"

I told him. I made it sound as ridiculous as possible, and as dangerous. I described the anorexia, the massive use of largely untested drugs that would have made the Institute illegal in the United States, the skepticism of most of the scientific community, the psychoses and death that had followed twin-trance research fifteen years earlier. Keith did not remember that—he had been eight years old—and I did not tell him that I had been one of the researchers. I did not tell him about the tapes of

the shadowy third presence in Bohentin's holotanks. In every way I could, with every verbal subtlety at my use, I made the Institute sound crackpot, and dangerous, and ugly. As I spoke, I watched Keith's face, and sometimes it was mine, and sometimes the expression altered it into Devrie's. I saw bewilderment at her having chosen to enter the Institute, but not what I had hoped to see. Not scorn, not disgust.

When I had finished, he said, "But why did she think that I might want to enter such a place as a twin subject?"

I had saved this for last. "Money. She'd buy you."

His hand, holding his third Scotch, went rigid. "Buy me."

"It's the most accurate way to put it."

"What the hell made her think—" he mastered himself, not without effort. Not all the discussion of bodily risk had affected him as much as this mention of Devrie's money. He had a poor man's touchy pride. "She thinks of me as something to be *bought*."

I was carefully quiet.

"Damn her," he said. "*Damn her*." Then, roughly, "And I was actually considering—"

I caught my breath. "Considering the Institute? After what I've just told you? How in hell could you? And you said, I remember, that your background was not religious!"

"It's not. But I . . . I've wondered." And in the sudden turn of his head away from me so that I wouldn't see the sudden rapt hopelessness in his eyes, in the defiant set of his shoulders; I read more than in his banal words, and more than he could know. Devrie's look, Devrie's wishfulness, feeding on air. The weariness and anger, checked before, flooded me again and I lashed out at him.

"Then go ahead and fly to Dominica to enter the Institute yourself!"

He said nothing. But from something—his expression as he stared into his glass, the shifting of his body—I suddenly knew that he could not afford the trip.

I said, "So you fancy yourself as a believer?"

"No. A believer *manqué*." From the way he said it, I knew that he had said it before, perhaps often, and that the phrase stirred some hidden place in his imagination.

"What is wrong with you," I said, "with people like you, that the human world is not enough?"

"What is wrong with people like you, that it is?" he said, and this time he laughed and raised his eyebrows in a little mockery that shut me out from this place beyond reason, this glittering escape. I knew then that somehow or other, sometime or other, despite all I had said, Keith would go to Dominica.

I poured him another Scotch. As deftly as I could, I led the conversation into other, lighter directions. I asked about his childhood. At first stiffly, then more easily as time and Scotch loosened him, he talked about growing up in the Berkshire Hills. He became more light-hearted, and under

my interest turned both shrewd and funny, with a keen sense of humor. His thick brown hair fell over his forehead. I laughed with him, and broke out a bottle of good port. He talked about amateur plays he had acted in; his enthusiasm increased as his coherence decreased. Enthusiasm, humor, thick brown hair. I smoothed the hair back from his forehead. Far into the night I pulled the drapes back from the window and we stood together and looked at the lights of the dying city ten stories below. Fog rolled in from the sea. Keith insisted we open the doors and stand on the balcony; he had never smelled fog tinged with the ocean. We smelled the night, and drank some more, and talked, and laughed.

And then I led him again to the sofa.

"Seena?" Keith said. He covered my hand, laid upon his thigh, with his own, and turned his head to look at me questioningly. I leaned forward and touched my lips to his, barely in contact, for a long moment. He drew back, and his hand tried to lift mine. I tightened my fingers.

"Seena, no . . ."

"Why not?" I put my mouth back on his, very lightly. He had to draw back to answer, and I could feel that he did not want to draw back. Under my lips he frowned slightly; still, despite his drunkenness—so much more than mine—he groped for the word.

"Incest . . ."

"No. We two have never shared a womb."

He frowned again, under my mouth. I drew back to smile at him, and shifted my hand. "It doesn't matter any more, Keith. Not in New York. But even if it did—I am not your sister, not really. You said so yourself—remember? Not a family. Just . . . here."

"Not family," he repeated, and I saw in his eyes the second before he closed them the flash of pain, the greed of a young man's desire, and even the crafty evasions of the good port. Then his arms closed around me.

He was very strong, and more than a little violent. I guessed from what confusions the violence flowed but still I enjoyed it, that overwhelming rush from that beautiful male-Devrie body. I wanted him to be violent with me, as long as I knew there was no real danger. No real danger, no real brother, no real child. Keith was not my child but Devrie was my child-sister, and I had to stop her from destroying herself, no matter how . . . didn't I? "The pull of blood." But this was necessary, was justified . . . was a necessary gamble. For Devrie.

So I told myself. Then I stopped telling myself anything at all, and surrendered to the warm tides of pleasure.

But at dawn I woke and thought—with Keith sleeping heavily across me and the sky cold at the window—*what the hell am I doing?*

When I came out of the shower, Keith was sitting rigidly against the pillows. Sitting next to him on the very edge of the bed, I pulled a sheet around my nakedness and reached for his hand. He snatched it away.

"Keith. It's all right. Truly it is."

"You're my sister."

"But nothing will come of it. No child, no repetitions. It's not all that uncommon, dear heart."

"It is where I come from."

"Yes. I know. But not here."

He didn't answer, his face troubled.

"Do you want breakfast?"

"No. No, thank you."

I could feel his need to get away from me; it was almost palpable. Snatching my bodysuit off the floor, I went into the kitchen, which was chilly. The servant would not arrive for another hour. I turned up the heat, pulled on my bodysuit—standing on the cold floor first on one foot and then on the other, like some extinct species of water fowl—and made coffee. Through the handle of one cup I stuck two folded large bills. He came into the kitchen, dressed even to the torn jacket.

"Coffee."

"Thanks."

His fingers closed on the handle of the cup, and his eyes widened. Pure, naked shock, uncushioned by any defenses whatsoever: the whole soul, betrayed, pinned in the eyes.

"Oh God, no, Keith—how can you even think so? It's for the trip back to Indian Falls! A gift!"

An endless pause, while we stared at each other. Then he said, very low, "I'm sorry. I should have . . . seen what it's for." But his cup trembled in his hand, and a few drops sloshed onto the floor. It was those few drops that undid me, flooding me with shame. Keith had a right to his shock, and to the anguish in his/my/Devrie's face. She wanted him for her mystic purposes, I for their prevention. Fanatic and saboteur, we were both better defended against each other than Keith, without money nor religion nor years, was against either of us. If I could have seen any other way than the gamble I had taken . . . but I could not. Nonetheless, I was ashamed.

"Keith. I'm sorry."

"Why did we? Why *did* we?"

I could have said: *we* didn't; I did. But that might have made it worse for him. He was male, and so young.

Impulsively I blurted, "Don't go to Dominical!" But of course he was beyond listening to me now. His face closed. He set down the coffee cup and looked at me from eyes much harder than they had been a minute ago. Was he thinking that because of our night together I expected to influence him directly? I was not that young. He could not foresee that I was trying to guess much farther ahead than that, for which I could not blame him. I could not blame him for anything. But I did regret how clumsily I had handled the money. That had been stupid.

Nonetheless, when he left a few moments later, the handle of the coffee cup was bare. He had taken the money.

The Madagascar exhibits were complete. They opened to much press interest, and there were both favorable reviews and celebrations. I could not bring myself to feel that it mattered. Ten times a day I went through the deadening exercise of willing an interest that had deserted me, and when I looked at the moths, ashy white wings outstretched forever, I could feel my body recoil in a way I could not name.

The image of the moths went home with me. One night in November I actually thought I heard wings beating against the window where I had stood with Keith. I yanked open the drapes and then the doors, but of course there was nothing there. For a long time I stared at the nothingness, smelling the fog, before typing yet another message, urgent-priority personal, to Devrie. The mailnet did not bring any answer.

I contacted the mailnet computer at the college at Indian Falls. My fingers trembled as they typed a request to leave an urgent-priority personal message for a student, Keith Torellen. The mailnet typed back:

TORELLEN, KEITH ROBERT. 64830016. ON MEDICAL LEAVE
OF ABSENCE. TIME OF LEAVE: INDEFINITE. NO FORWARD-
ING MAILNET NUMBER. END.

The sound came again at the window. Whirling, I scanned the dark glass, but there was nothing there, no moths, no wings, just the lights of the decaying city flung randomly across the blackness and the sound, faint and very far away, of a siren wailing out somebody else's disaster.

I shivered. Putting on a sweater and turning up the heat made me no warmer. Then the mail slot chimed softly and I turned in time to see the letter fall from the pneumatic tube from the lobby, the apartment house sticker clearly visible, assuring me that it had been processed and found free of both poison and explosives. Also visible was the envelope's logo: INSTITUTE OF THE BIOLOGICAL HOPE, all the O's radiant golden suns. But Devrie never wrote paper mail. She preferred the mailnet.

The note was from Keith, not Devrie. A short note, scrawled on a torn scrap of paper in nearly indecipherable handwriting. I had seen Keith's handwriting in Indian Falls, across his student notebooks; this was a wildly out-of-control version of it, almost psychotic in the variations of spacing and letter formation that signal identity. I guessed that he had written the note under the influence of a drug, or several drugs, his mind racing much faster than he could write. There was neither punctuation nor paragraphing.

Dear Seena Im going to do it I have to know my parents are angry
but I have to know I have to all the confusion is gone Seena Keith

There was a word crossed out between "gone" and "Seena," scratched out with erratic lines of ink. I held the paper up to the light, tilting it this way and that. The crossed-out word was "mother."

all the confusion is gone mother

Mother.

Slowly I let out the breath I had not known I was holding. The first

emotion was pity, for Keith, even though I had intended this. We had done a job on him, Devrie and I. Mother, sister, self. And when he and Devrie artificially drove upward the number and speed of the neurotransmitters in the brain, generated the twin trance, and then Keith's pre-cloning Freudian-still mind reached for Devrie to add sexual energy to all the other brain energies fueling Bohentin's holotanks—

Mother. Sister. Self.

All was fair in love and war. A voice inside my head jeered: And which is this? But I was ready for the voice. This was both. I didn't think it would be long before Devrie left the Institute to storm to New York.

It was nearly another month, in which the snow began to fall and the city to deck itself in the tired gilt fallacies of Christmas. I felt fine. Humming, I catalogued the Madagascar moths, remounting the best specimens in exhibit cases and sealing them under permaplex, where their fragile wings and delicate antennae could lie safe. The mutant strains had the thinnest wings, unnaturally tenuous and up to twenty-five centimeters each, all of pale ivory, as if a ghostly delicacy were the natural evolutionary response to the glowing landscape of nuclear genocide. I catalogued each carefully.

"Why?" Devrie said. "Why?"

"You look like hell."

"Why?"

"I think you already know," I said. She sagged on my white velvet sofa, alone, the PGs that I suspected acted as much as nurses as guards, dismissed from the apartment. Tears of anger and exhaustion collected in her sunken eye sockets but did not fall. Only with effort was she keeping herself in a sitting position, and the effort was costing her energy she did not have. Her skin, except for two red spots of fury high on each cheekbone, was the color of old eggs. Looking at her, I had to keep my hands twisted in my lap to keep myself from weeping.

"Are you telling me you *planned* it, Seena? Are you telling me you located Keith and slept with him because you knew that would make him impotent with me?"

"Of course not. I know sexuality isn't that simple. So do you."

"But you gambled on it. You gambled that it would be one way to ruin the experiment."

"I gambled that it would . . . complicate Keith's responses."

"Complicate them past the point where he knew who the hell he was with!"

"He'd be able to know if you weren't making him glow out of his mind with neurotransmitter kickers! He's not stupid. But he's not ready for whatever mystic hoops you've tried to make him jump through—if anybody ever *can* be said to be ready for that!—and no, I'm not surprised that he can't handle libidinal energies on top of all the other artificial energies you're racing through his brain. Something was bound to snap."

"You caused it, Seena. As cold-bloodedly as that."

A sudden shiver of memory brought the feel of Keith's hands on my breasts. No, not as cold-bloodedly as that. No. But I could not say so to Devrie.

"I trusted you," she said. "'Anything for a sister'—God!"

"You were right to trust me. To trust me to get you out of that place before you're dead."

"Listen to yourself! Smug, all-knowing, self-righteous . . . do you know how *close* we were at the Institute? Do you have any idea what you've destroyed?"

I laughed coldly. I couldn't help it. "If contact with God can be destroyed because one confused kid can't get it up, what does that say about God?"

Devrie stared at me. A long moment passed, and in the moment the two red spots on her cheeks faded and her eyes narrowed. "Why, Seena?"

"I told you. I wanted you safe, out of there. And you are."

"No. No. There's something else, something more going on here. Going on with you."

"Don't make it more complicated than it is, Devrie. You're my sister, and my only family. Is it so odd that I would try to protect you?"

"Keith is your brother."

"Well, then, protect both of you. Whatever details that experiment protects Keith, too."

She said softly, "Did you want him so much?"

We stared at each other across the living room, sisters, I standing by the mailnet and she supported by the sofa, needing its support, weak and implacable as any legendary martyr to the faith. Her weakness hurt me in some nameless place; as a child Devrie's body had been so strong. The hurt twisted in me, so that I answered her with truth. "Not so much. Not at first, not until we . . . no, that's not true. I wanted him. But that was not the reason, Devrie—it was not a rationalization for lust, nor any lapse in self-control."

She went on staring at me, until I turned to the sideboard and poured myself a Scotch. My hand trembled.

Behind me Devrie said, "Not lust. And not protection either. Something else, Seena. You're afraid."

I turned, smiling tightly. "Of you?"

"No. No, I don't think so."

"What then?"

"I don't know. Do you?"

"This is your theory, not mine."

She closed her eyes. The tears, shining all this time over her anger, finally fell. Head flung back against the pale sofa, arms limp at her side, she looked the picture of desolation, and so weak that I was frightened. I brought her a glass of milk from the kitchen and held it to her mouth, and I was a little surprised when she drank it off without protest.

"Devrie. You can't go on like this. In this physical state."

"No," she agreed, in a voice so firm and prompt that I was startled further. It was the voice of decision, not surrender. She straightened herself on the sofa. "Even Bohentin says I can't go on like this. I weigh less than he wants, and I'm right at the edge of not having the physical resources to control the twin trance. I'm having racking withdrawal symptoms even being on this trip, and at this very minute there is a doctor sitting at Father's desk in your study, in case I need him. Also, I've had my lawyers make over most of my remaining inheritance to Keith. I don't think you knew that. What's left has all been transferred to a bank on Dominica, and if I die it goes to the Institute. You won't be able to touch it, nor touch Keith's portion either, not even if I die. And I will die, Seena, soon, if I don't start eating and stop taking the program's drugs. I'll just burn out body and brain both. You've guessed that I'm close to that, but you haven't guessed how close. Now I'm telling you. I can't handle the stresses of the twin trance much longer."

I just went on holding her glass, arm extended, unable to move.

"You gambled that you could destroy one component in the chain of my experiment at the Institute by confusing my twin sexually. Well, you won. Now I'm making a gamble. I'm gambling my life that you can undo what you did with Keith, and without his knowing that I made you. You said he's not stupid and his impotency comes from being unable to handle the drug program; perhaps you're partly right. But he is me—*me*, Seena—and I know you've thought I was stupid all my life, because I wanted things you don't understand. Now Keith wants them, too—it was inevitable that he would—and you're going to undo whatever is standing in his way. I had to fight myself free all my life of your bullying, but Keith doesn't have that kind of time. Because if you don't undo what you caused, I'm going to go ahead with the twin trance anyway—the *twin trance*, Seena—without the sexual component and without letting Bohentin know just how much greater the strain is in trance than he thinks it is. He doesn't know, he doesn't have a twin, and neither do the doctors. But I know, and if I push it much farther I'm going to eventually die at it. *Soon* eventually. When I do, all your scheming to get me out of there really will have failed and you'll be alone with whatever it is you're so afraid of. But I don't think you'll let that happen.

"I think that instead you'll undo what you did to Keith, so that the experiment can have one last real chance. And in return, after that one chance, I'll agree to come home, to Boston or here to New York, for one year.

"That's my gamble."

She was looking at me from eyes empty of all tears, a Devrie I had not ever seen before. She meant it, every demented word, and she would do it. I wanted to scream at her, to scream a jumble of suicide and moral blackmail and warped perceptions and outrage, but the words that came out of my mouth came out in a whisper.

"What in God's name is worth *that*?"

Shockingly, she laughed, a laugh of more power than her wasted frame could have contained. Her face glowed, and the glow looked both exalted and insane. "You said it, Seena—in God's name. To finally know. To *know*, beyond the fogginess of faith, that we're not alone in the universe. . . . Faith should not mean fogginess." She laughed again, this time defensively, as if she knew how she sounded to me. "You'll do it, Seena." It was not a question. She took my hand.

"You would *kill* yourself?"

"No. I would die trying to reach God. It's not the same thing."

"I never bullied you, Devrie."

She dropped my hand. "All my life, Seena. And on into now. But all of your bullying and your scorn would look rather stupid, wouldn't it, if there really can be proved to exist a rational basis for what you laughed at all those years?"

We looked at each other, sisters, across the abyss of the pale sofa, and then suddenly away. Neither of us dared speak.

My plane landed on Dominica by night. Devrie had gone two days before me, returning with her doctor and guards on the same day she had left, as I had on my previous visit. I had never seen the island at night. The tropical greenery, lush with that faintly menacing suggestion of plant life gone wild, seemed to close in on me. The velvety darkness seemed to smell of ginger, and flowers, and the sea—all too strong, too blandly sensual, like an overdone perfume ad. At the hotel it was better; my room was on the second floor, above the dark foliage, and did not face the sea. Nonetheless, I stayed inside all that evening, all that darkness, until I could go the next day to the Institute of the Biological Hope.

"Hello, Seena."

"Keith. You look—"

"Rotten," he finished, and waited. He did not smile. Although he had lost some weight, he was nowhere near as skeletal as Devrie, and it gave me a pang I did not analyze to see his still-healthy body in the small gray room where last I had seen hers. His head was shaved, and without the curling brown hair he looked sterner, prematurely middle-aged. That, too, gave me a strange emotion, although it was not why he looked rotten. The worst was his eyes. Red-veined, watery, the sockets already a little sunken, they held the sheen of a man who was not forgiving somebody for something. Me? Himself? Devrie? I had lain awake all night, schooling myself for this insane interview, and still I did not know what to say. What does one say to persuade a man to sexual potency with one's sister so that her life might be saved? I felt ridiculous, and frightened, and—I suddenly realized the name of my strange emotion—humiliated. How could I even start to slog towards what I was supposed to reach?

"How goes the Great Experiment?"

"Not as you described it," he said, and we were there already. I looked at him evenly.

"You can't understand why I presented the Institute in the worst possible light."

"I can understand that."

"Then you can't understand why I bedded you, knowing about Bohenin's experiment."

"I can also understand that."

Something was wrong. Keith answered me easily, without restraint, but with conflict gritty beneath his voice, like sand beneath blowing grass. I stepped closer, and he flinched. But his expression did not change.

"Keith. What is this about? What am I doing here? Devrie said you couldn't . . . that you were impotent with her, confused enough about who and what . . ." I trailed off. He still had not changed expression.

I said quietly, "It was a simplistic idea in the first place. Only someone as simplistic as Devrie . . ." Only someone as simplistic as Devrie would think you could straighten out impotency by talking about it for a few hours. I turned to go, and I had gotten as far as laying my hand on the doorknob before Keith grasped my arm. Back to him, I squeezed my eyes shut. What in God would I have *done* if he had not stopped me?

"It's not what Devrie thinks!" With my back to him, not able to see his middle-aged baldness but only to hear the anguish in his voice, he again seemed young, uncertain, the boy I had bought coffee for in Indian Falls. I kept my back to him, and my voice carefully toneless.

"What is it, then, Keith? If not what Devrie thinks?"

"I don't know!"

"But you do know what it's not? It's not being confused about who is your sister and who your mother and who you're willing to have sex with in front of a room full of researchers?"

"No." His voice had gone hard again, but his hand stayed on my arm. "At first, yes. The first time. But, Seena—I *felt* it. *Almost*. I almost felt the presence, and then all the rest of the confusion—it didn't seem as important anymore. Not the confusion between you and Devrie."

I whirled to face him. "You mean God doesn't care whom you fuck if it gets you closer to fucking with Him."

He looked at me hard then—at me, not at his own self-absorption. His reddened eyes widened a little. "Why, Seena—you care. You told me the brother-sister thing didn't matter anymore—but *you* care."

Did I? I didn't even know anymore. I said, "But, then, I'm not deluding myself that it's all for the old Kingdom and the Glory."

"Glory," he repeated musingly, and finally let go of my arm. I couldn't tell what he was thinking.

"Keith. This isn't getting us anywhere."

"Where do you want to get?" he said in the same musing tone. "Where did any of you, starting with your father, want to get with me? Glory . . . glory."

Standing this close to him, seeing close up the pupils of his eyes and smelling close up the odor of his sweat, I finally realized what I should

have seen all along: he was glowing. He was of course constantly on Bohentin's program of neurotransmitter manipulation, but the same chemicals that made the experiments possible also raised the threshold of both frankness and suggestibility. I guessed it must be a little like the looseness of being drunk, and I wondered if perhaps Bohentin might have deliberately raised the dosage before letting this interview take place. But no, Bohentin wouldn't be aware of the bargain Devrie and I had struck; she would not have told him. The whole bizarre situation was hers alone, and Keith's drugged musings a fortunate side-effect I would have to capitalize on.

"Where do you think my father wanted to get with you?" I asked him gently.

"Immortality. Godhead. The man who created Adam without Eve."

He was becoming maudlin. "Hardly 'the man,'" I pointed out. "My father was only one of a team of researchers. And the same results were being obtained independently in California."

"Results. I am a 'result.' What do you think he wanted, Seena?"

"Scientific knowledge of cell development. An objective truth."

"That's all Devrie wants."

"To compare bioengineering to some mystic quest—"

"Ah, but if the mystic quest is given a laboratory answer? Then it, too, becomes a scientific truth. You really hate that idea, don't you, Seena? You hate science validating anything you define as non-science."

I said stiffly, "That's rather an oversimplification."

"Then what do you hate?"

"I hate the risk to human bodies and human minds. To Devrie. To you."

"How nice of you to include me," he said, smiling. "And what do you think Devrie wants?"

"Sensation. Romantic religious emotion. To be all roiled up inside with delicious esoterica."

He considered this. "Maybe."

"And is that what you want as well, Keith? You've asked what everyone else wants. What do you want?"

"I want to feel at home in the universe. As if I belonged in it. And I never have."

He said this simply, without self-consciousness, and the words themselves were predictable enough for his age—even banal. There was nothing in the words that could account for my eyes suddenly filling with tears. "And 'scientifically' reaching God would do that for you?"

"How do I know until I try it? Don't cry, Seena."

"I'm not!"

"All right," he agreed softly. "You're not crying." Then he added, without changing tone, "I am more like you than like Devrie."

"How so?"

"I think that Devrie has always felt that she belongs in the universe."

She only wants to find the . . . the coziest corner of it to curl up in. Like a cat. The coziest corner to curl up in is God's lap. Aren't you surprised that I should be more like you than like the person I was cloned from?"

"No," I said. "Harder upbringing than Devrie's. I told you that first day: cloning is only delayed twinning."

He threw back his head and laughed, a sound that chilled my spine. Whatever his conflict was, we were moving closer.

"Oh no, Seena. You're so wrong. It's more than delayed twinning, all right. You can't buy a real twin. You either have one or you don't. But you can buy yourself a clone. Bought, paid for, kept on the books along with all the rest of the glassware and holotanks and electron microscopes. You said so yourself, in your apartment, when you first told me about Devrie and the Institute. 'Money. She'd buy you.' And you were right, of course. Your father bought me, and she did, and you did. But of course you two women couldn't have bought if I hadn't been selling."

He was smiling still. Stupid—we had both been stupid, Devrie and I, we had both been looking in the wrong place, misled by our separate blinders-on training in the laboratory brain. My training had been scientific, hers humanistic, and so I looked at Freud and she looked at Oedipus, and we were equally stupid. How did the world look to a man who did not deal in laboratory brains, a man raised in a grittier world in which limits were not what the mind was capable of but what the bank book would stand? 'Your genes are too expensive for you to claim except as a beggar; your sisters are too expensive for you to claim except as a beggar; God is too expensive for you to claim except as a beggar.' To a less romantic man it would not have mattered, but a less romantic man would not have come to the Institute. What dark humiliations and resentments did Keith feel when he looked at Devrie, the self who was buyer and not bought?

Change the light you shine onto a mind, and you see different neural patterns, different corridors, different forests of trees grown in soil you could not have imagined. Run that soil through your fingers and you discover different pebbles, different sand, different leaf mold from the decay of old growths. Devrie and I had been hacking through the wrong forest.

Not Oedipus, but Marx.

Quick lines of attack came to me. Say: Keith it's a job like any other with high-hazard pay why can't you look at it like that a very dangerous and well-paid job for which you've been hired by just one more eccentric member of the monied class. Say: You're entitled to the wealth you're our biological brother damn it consider it rationally as a kinship entitlement. Say: Don't be so nicey-nice it's a tough world out there and if Devrie's giving it away take it don't be an impractical chump.

I said none of that. Instead I heard myself saying, coolly and with a calm cruelty, "You're quite right. You were bought by Devrie, and she is now using her own purchase for her own ends. You're a piece of equip-

ment bought and paid for. Unfortunately, there's no money in the account. It has all been a grand sham."

Keith jerked me to face him with such violence that my neck cracked. "What are you saying?"

The words came as smoothly, as plausibly, as if I had rehearsed them. I didn't even consciously plan them: how can you plan a lie you do not know you will need? I slashed through this forest blind, but the ground held under my feet.

"Devrie told me that she has signed over most of her inheritance to you. What she didn't know, because I haven't yet told her, is that she doesn't have control of her inheritance any longer. It's not hers. I control it. I had her declared mentally incompetent on the grounds of violent suicidal tendencies and had myself made her legal guardian. She no longer has the legal right to control her fortune. A doctor observed her when she came to visit me in New York. So the transfer of her fortune to you is invalid."

"The lawyers who gave me the papers to sign—"

"Will learn about the New York action this week," I said smoothly. How much inheritance law did Keith know? Probably very little. Neither did I, and I invented furiously; it only needed to *sound* plausible. "The New York courts only handed down their decision recently, and Dominican judicial machinery, like everything else in the tropics, moves slowly. But the ruling will hold, Keith. Devrie does not control her own money, and you're a pauper again. But I have something for you. Here. An airline ticket back to Indian Falls. You're a free man. Poor, but free. The ticket is in your name, and there's a check inside it—that's from me. You've earned it, for at least trying to aid poor Devrie. But now you're going to have to leave her to me. I'm now her legal guardian."

I held the ticket out to him. It was wrapped in its airline folder; my own name as passenger was hidden. Keith stared at it, and then at me.

I said softly, "I'm sorry you were cheated. Devrie didn't mean to. But she has no money, now, to offer you. You can go. Devrie's my burden now."

His voice sounded strangled. "To remove from the Institute?"

"I never made any secret of wanting her out. Although the legal papers for that will take a little time to filter through the Dominican courts. She wouldn't go except by force, so force is what I'll get. Here."

I thrust the ticket folder at him. He made no move to take it, and I saw from the hardening of his face—my face, Devrie's face—the moment when Devrie shifted forests in his mind. Now she was without money, without legal control of her life, about to be torn from the passion she loved most. The helpless underdog. The orphaned woman, poor and cast out, in need of protection from the powerful who had seized her fortune.

Not Marx, but Cervantes.

"You would do that? To your own sister?"

Anything for a sister. I said bitterly, "Of course I would."

"She's not mentally incompetent!"

"Isn't she?"

"No!"

I shrugged. "The courts say she is."

Keith studied me, resolve hardening around him. I thought of certain shining crystals, that will harden around any stray piece of grit. Now that I was succeeding in convincing him, my lies hurt—or perhaps what hurt was how easily he believed them.

"Are you sure, Seena," he said, "that you aren't just trying a grab for Devrie's fortune?"

I shrugged again, and tried to make my voice toneless. "I want her out of here. I don't want her to die."

"Die? What makes you think she would die?"

"She looks—"

"She's nowhere near dying," Keith said angrily—his anger a release, so much that it hardly mattered at what. "Don't you think I can tell in twin trance what her exact physical state is? And don't you know how much control the trance gives each twin over the bodily processes of the other? Don't you even know that? Devrie isn't anywhere near dying. And I'd pull her out of trance if she were." He paused, looking hard at me. "Keep your ticket, Seena."

I repeated mechanically, "You can leave now. There's no money." *Devrie had lied to me.*

"That wouldn't leave her with any protection at all, would it?" he said levelly. When he grasped the door knob to leave, the tendons in his wrist stood out clearly, strong and taut. I did not try to stop his going.

Devrie had lied to me. With her lie, she had blackmailed me into yet another lie to Keith. The twin trance granted control, in some unspecified way, to each twin's body; the trance I had pioneered might have resulted in eight deaths unknowingly inflicted on each other out of who knows what dark forests in eight fumbling minds. Lies, blackmail, death, more lies.

Out of these lies they were going to make scientific truth. Through these forests they were going to search for God.

"Final clearance check of holotanks," an assistant said formally. "Faraday cage?"

"Optimum."

"External radiation?"

"Cleared," said the man seated at the console of the first tank.

"Cleared," said the woman seated at the console of the second.

"Microradiation?"

"Cleared."

"Cleared."

"Personnel radiation, Class A?"

"Cleared."

"Cleared."

On it went, the whole tedious and crucial procedure, until both tanks had been cleared and focused, the fluid adjusted, tested, adjusted again, tested again. Bohentin listened patiently, without expression, but I, standing to the side of him and behind the tanks, saw the nerve at the base of his neck and just below the hairline pulse in some irregular rhythm of its own. Each time the nerve pulsed, the skin rose slightly from under his collar. I kept my eyes on that syncopated crawling of flesh, and felt tension prickle over my own skin like heat.

Three-quarters of the lab, the portion where the holotanks and other machinery stood, was softly dark, lit mostly from the glow of console dials and the indirect track lighting focused on the tanks. Standing in the gloom were Bohentin, five other scientists, two medical doctors—and me. Bohentin had fought my being allowed there, but in the end he had had to give in. I had known too many threatening words not in generalities but in specifics: reporters' names, drug names, cloning details, twin trance tragedy, anorexia symptoms, bioengineering amendment. He was not a man who much noticed either public opinion or relatives' threats, but no one else outside his Institute knew so many so specific words—some people knew some of the words, but only I had them all. In the end he had focused on me his cold, brilliant eyes, and given permission for me witness the experiment that involved my sister.

I was going to hold Devrie to her bargain. I was not going to believe anything she told me without witnessing it for myself.

Half the morning passed in technical preparation. Somewhere Devrie and Keith, the human components of this costly detection circuit, were separately being brought to the apex of brain activity. Drugs, biofeedback, tactile and auditory and kinaesthetic stimulation—all carefully calculated for the maximum increase of both the number of neurotransmitters firing signals through the synapses of the brain and of the speed at which the signals raced. The more rapid the transmission through certain pathways, the more intense both perception and feeling. Some neurotransmitters, under this pressure, would alter molecular structure into natural hallucinogens; that reaction had to be controlled. Meanwhile other drugs, other biofeedback techniques, would depress the body's natural enzymes designed to either reabsorb excess transmitters or to reduce the rate at which they fired. The number and speed of neurotransmitters in Keith's and Devrie's brains would mount, and mount, and mount, all natural chemical barriers removed. The two of them would enter the lab with their whole brains—rational cortex, emotional limbic, right and left brain functions—simultaneously aroused to an unimaginable degree. *Simultaneously*. They would be feeling as great a "rush" as a falling skydiver, as great a glow as a cocaine user, as great a mental clarity and receptivity as a da Vinci whose brush is guided by all the integrated visions of his unconscious mind. They would be white-hot.

Then they would hit each other with the twin trance.

The quarter of the lab which Keith and Devrie would use was softly and indirectly lit, though brighter than the rest. It consisted of a raised, luxuriantly padded platform, walls and textured pillows in a pink whose component wavelengths had been carefully calculated, temperature in a complex gradient producing precise convection flows over the skin. The man and woman in that womb-colored, flesh-stimulating environment would be able to see us observers standing in the gloom behind the holotanks only as vague shapes. When the two doors opened and Devrie and Keith moved onto the platform, I knew that they would not even try to distinguish who stood in the lab. Looking at their faces, that looked only at each other, I felt my heart clutch.

They were naked except for the soft helmets that both attached hundreds of needles to nerve clumps just below the skin and also held the earphones through which Bohentin controlled the music that swelled the cathedrals of their skulls. "Cathedrals"—from their faces, transfigured to the ravished ecstasy found in paintings of medieval saints, that was the right word. But here the ecstasy was controlled, understood, and I saw with a sudden rush of pain at old memories that I could recognize the exact moment when Keith and Devrie locked onto each other with the twin trance. I recognized it, with my own more bitter hyperclarity, in their eyes, as I recognized the cast of concentration that came over their features, and the intensity of their absorption. The twin trance. They clutched each other's hands, faces inches apart, and suddenly I had to look away.

Each holotank held two whorls of shifting colors, the outlines clearer and the textures more sharply delineated than any previous holographs in the history of science. Keith's and Devrie's perceptions of each other's presence. The whorls went on clarifying themselves, separating into distinct and mappable layers, as on the platform Keith and Devrie remained frozen, all their energies focused on the telepathic trance. Seconds passed, and then minutes. And still, despite the clarity of the holographs in the tank, a clarity that fifteen years earlier I would have given my right hand for, I sensed that Keith and Devrie were holding back, were deliberately confining their unimaginable perceptiveness to each other's radiant energy, in the same way that water is confined behind a dam to build power.

But how could I be sensing that? From a subliminal "reading" of the mapped perceptions in the holotanks? Or from something else?

More minutes passed. Keith and Devrie stayed frozen, facing each other, and over her skeletal body and his stronger one a flush began to spread, rosy and slow, like heat tide rising.

"Jesus H. Christ," said one of the medical doctors, so low that only I, standing directly behind her, could have heard. It was not a curse, nor a prayer, but some third possibility, unnameable.

Keith put one hand on Devrie's thigh. She shuddered. He drew her down to the cushions on the platform and they began to caress each

other, not frenzied, not in the exploring way of lovers but with a deliberation I have never experienced outside a research lab, a slow care that implied that worlds of interpretation hung on each movement. Yet the effect was not of coldness nor detachment but of intense involvement, of tremendous energy joyously used, of creating each other's bodies right then, there under each other's hands. They were *working*, and oblivious to all but their work. But if it was a kind of creative work, it was also a kind of primal innocent eroticism, and, watching, I felt my own heat begin to rise. "Innocent"—but if innocence is unknowingness, there was nothing innocent about it at all. Keith and Devrie knew and controlled each heartbeat, and I felt the exact moment when they let their sexual energies, added to all the other neural energies, burst the dam and flood outward in wave after wave, expanding the scope of each brain's perceptions, inundating the artificially-walled world.

A third whorl formed in each holotank.

It formed suddenly: one second nothing, the next brightness. But then it wavered, faded a bit. After a few moments it brightened slightly, a diffused golden haze, before again fading. On the platform Keith gasped, and I guessed he was having to shift his attention between perceiving the third source of radiation and keeping up the erotic version of the twin trance. His biofeedback techniques were less experienced than Devrie's, and the male erection more fragile. But then he caught the rhythm, and the holograph brightened.

It seemed to me that the room brightened as well, although no additional lights came on and the consoles glowed no brighter. Sweat poured off the researchers. Bohentin leaned forward, his neck muscle tautening toward the platform as if it were his will and not Keith/Devrie's that strained to perceive that third presence recorded in the tank. I thought, stupidly, of mythical intermediaries: Merlyn never made king, Moses never reaching the Promised Land. Intermediaries—and then it became impossible to think of anything at all.

Devrie shuddered and cried out. Keith's orgasm came a moment later, and with it a final roil of neural activity so strong the two primary whorls in each holotank swelled to fill the tank and inundate the third. At the moment of breakthrough Keith screamed, and in memory it seems as if the scream was what tore through the last curtain—that is nonsense. How loud would microbes have to scream to attract the attention of giants? How loud does a knock on the door have to be to pull a sleeper from the alien world of dreams?

The doctor beside me fell to her knees. The third presence—or some part of it—swirled all around us, racing along our own unprepared synapses and neurons, and what swirled and raced was astonishment. A golden, majestic astonishment. We had finally attracted its attention, finally knocked with enough neural force to be just barely heard—and it was astonished that we could, or did, exist. The slow rise of that powerful astonishment within the shielded lab was like the slow swing-

ing around of the head of a great beast to regard some butterfly it has barely glimpsed from the corner of one eye. But this was no beast. As its attention swung towards us, pain exploded in my skull—the pain of sound too loud, lights too bright, charge too high. My brain was burning on overload. There came one more flash of insight—wordless, pattern without end—and the sound of screaming. Then, abruptly, the energy vanished.

Bohentin, on all fours, crawled toward the holotanks. The doctor lay slumped on the floor; the other doctor had already reached the platform and its two crumpled figures. Someone was crying, someone else shouting. I rose, fell, dragged myself to the side of the platform and then could not climb it. I could not climb the platform. Hanging with two hands on the edge, hearing the voice crying as my own, I watched the doctor bend shakily to Keith, roll him off Devrie to bend over her, turn back to Keith.

Bohentin cried, "The tapes are intact!"

"Oh God oh God oh God oh God oh God," someone moaned, until abruptly she stopped. I grasped the flesh-colored padding on top of the platform and pulled myself up onto it.

Devrie lay unconscious, pulse erratic, face cast in perfect bliss. The doctor breathed into Keith's mouth—what strength could the doctor himself have left?—and pushed on the naked chest. Breathe, push, breathe, push. The whole length of Keith's body shuddered; the doctor rocked back on his heels; Keith breathed.

"It's all on tape!" Bohentin cried. "It's all on tape!"

"God damn you to hell," I whispered to Devrie's blissful face. "It didn't even know we were there!"

Her eyes opened. I had to lean close to hear her answer.

"But now . . . we know He . . . is there."

She was too weak to smile. I looked away from her, away from that face, out into the tumultuous emptiness of the lab, anywhere.

They will try again.

Devrie has been asleep, fed by glucose solution through an IV, for fourteen hours. I sit near her bed, frowned at by the nurse, who can see my expression as I stare at my sister. Somewhere in another bed Keith is sleeping yet again. His rest is more fitful than Devrie's; she sinks into sleep as into warm water, but he cannot. Like me, he is afraid of drowning.

An hour ago he came into Devrie's room and grasped my hand. "How could It—He—It not have been aware that we existed? Not even have *known*?"

I didn't answer him.

"You felt it too, Seena, didn't you? The others say they could, so you must have too. It . . . created us in some way. No, that's wrong. How could It create us and not *know*?"

I said wearily, "Do *we* always know what we've created?" and Keith

glanced at me sharply. But I had not been referring to my father's work in cloning.

"Keith. What's a *Thysania Africana*?"

"A what?"

"Think of us," I said, "as just one more biological side-effect. One type of being acts, and another type of being comes into existence. Man stages something like the African Horror, and in doing so he creates whole new species of moths and doesn't even discover they exist until long afterward. If man can do it, why not God? And why should He be any more aware of it than we are?"

Keith didn't like that. He scowled at me, and then looked at Devrie's sleeping face: Devrie's sleeping bliss.

"Because she is a fool," I said savagely, "and so are you. You won't leave it alone, will you? Having been noticed by It once, you'll try to be noticed by It again. Even though she promised me otherwise, and even if it kills you both."

Keith looked at me a long time, seeing clearly—finally—the nature of the abyss between us, and its dimensions. But I already knew neither of us could cross. When at last he spoke, his voice held so much compassion that I hated him. "Seena. Seena, love. There's no more doubt now, don't you see? Now rational belief is no harder than rational doubt. Why are you so afraid to even believe?"

I left the room. In the corridor I leaned against the wall, palms spread flat against the tile, and closed my eyes. It seemed to me that I could hear wings, pale and fragile, beating against glass.

They will try again. For the sake of sure knowledge that the universe is not empty, Keith and Devrie and all the others like their type of being will go on pushing their human brains beyond what the human brain has evolved to do, go on fluttering their wings against that biological window. For the sake of sure knowledge: belief founded on experiment and not on faith. And the Other: being/alien/God? It, too, may choose to initiate contact, if It can and now that It knows we are here. Perhaps It will seek to know *us*, and even beyond the laboratory Devrie and Keith may find any moment of heightened arousal subtly invaded by a shadowy Third. Will they sense It, hovering just beyond consciousness, if they argue fiercely or race a sailboat in rough water or make love? How much arousal will it take, now, for them to sense those huge wings beating on the *other* side of the window?

And windows can be broken.

Tomorrow I will fly back to New York. To my museum, to my exhibits, to my moths under permaplex, to my empty apartment, where I will keep the heavy drapes drawn tightly across the glass.

For—oh God—all the rest of my life. ●

ON BOOKS

by Baird Searles

Voyager In Night

By C.J. Cherryh

DAW Books, \$2.95 (paper)

C.J. Cherryh is a gutsy lady; she obviously believes in taking chances. Having achieved her greatest popularity with sociological/technical SF (the "Faded Sun" trilogy, *Downbelow Station*, et al.), she essayed a high fantasy, *Dreamstone*, and won the gamble triumphantly.

She's taken a chance with her latest novel, *Voyager In Night*, and, alas, the results are a lot less felicitous. Essentially, she's trying to convey the unconveyable, putting the totally alien into human terms, and the results are going to confound a lot of readers. . . . Not to mention this reviewer, who has the problem of attempting to convey the attempt to convey the unconveyable. (Are you following this?)

Three humans, a husband/wife team and her brother, who are asteroid miners in a distant system, are captured, along with their tiny ship, by a huge alien craft. Badly injured, they "wake" to find that now they are four; there are *two* Rafes (the brother). Isolated with the remains of their ship in a maze of corridors, with no contact from their captors, they deduce that two

of them (Paul and Jillian, the husband and wife) were killed in the capture, but that duplicates had been made of all three of them—only one of the Rafes shows signs of injury.

The quartet spend a good deal of time discussing their situation and wandering around in the corridors; the three "duplicates" (they think of themselves as androids) can also transit into a peculiar sort of space where the original human is unable to follow. Here they run into strange manifestations which may or may not be the aliens whose ship they are on.

Interpolated into these events are incidents of what *is* going on among the aliens, and here the going gets *really* sticky. The ship is manned by beings with names such as | , = = = , and < > ; then for variety there's < / > and = < > = = < + > = . About all one can gather initially is that there is some sort of internecine conflict taking place.

Then to compound confusion, more duplicates of the humans start showing up, some of which seem mad and some of which have the personalities of the aliens. Can things get *more* complicated? Yes. The humans start showing up in combination.

Cherryh is, needless to say, an intelligent writer, and there is an overall rationale to all this. But the problems are many. For one thing, almost half the novel goes by before any sense starts to be made; the four "humans" wander around the corridors and their strange non-space, speculating, nattering, and, in the case of the simulacra, blinking in and out of "real" space; Cherryh, in other words, has shown this tendency to kill time and go in circles. And this is interpolated with the totally opaque accounts of < > and Co. and *their* goings on, and enormous patience is asked of the reader to hang in there until something coherent happens.

For another, there are the aliens. It's a bold stroke to label them as Cherryh has, but it results in paragraphs such as:

"< > extended a filament of </>self all about the center, advanced Paulmind and = = = = in their attack. The passengers huddled far and afraid . . . excepting (((()))), who had forgotten who had killed (((()))), long ago; excepting entities like [], who ranged themselves, with </>. '< >'ve grown older and less integrated, < >. Give up the center.' "

Phew!

The author is asking a lot of the reader here. Has she the right? That's an unanswerable question. The dedicated Cherryh picker will slog through, and reap what rewards there are in a complex puzzle novel that may or may not be worth the effort; perhaps only doing so by starting the novel all over again once the end is reached. But the casual reader? Lots of luck.

Salvage and Destroy

By Edward Llewellyn

DAW, \$2.95 (paper)

Have all the simple plots and concepts been used up? Edward Llewellyn presents us with another really complicated situation, containing just about everything but the lavatory sink (no, there's one of those in it, come to think of it) in *Salvage and Destroy*. Luckily, he gives the reader the background and what's going on ASAP, and then gets on with a whizzer of a story, piling in more and more, but always keeping us up on what's happening.

He starts off with an interstellar "empire" concentrated in "the Cluster," and dominated by a race called the Ultrons. This peaceful hegemony is more than a bit stagnant, albeit prosperous and very, very civilized. But none of the component races at this point care much for the rigors of space travel, so all worlds not in the matter-transport-net are more or less being abandoned.

However, contrary to this, one minority race does enjoy spacehopping in ships; these are the descendants of a group of humans rescued by a soft-hearted exploratory expedition. In imminent danger of drowning on a sand bar in colonial New England in the 17th century, they were taken back to the Cluster and they bred like—er—humans.

No further contact with Earth has been made, except for a planted monitor which forwarded radio and television broadcasts (as they were invented) as well as other data. It has now been made clear that the

planetary population will destroy itself in a matter of years, and a new expedition is sent to salvage what they can of Earth's culture and retrieve the monitor, for fear of its being discovered on the off chance that Earth doesn't go bang.

The expedition must, of necessity, be manned by humans, who have kept up with their home world by the monitor's forwarded transmissions. There will be one Ultron "adviser" on board; this is the narrator of the story, one Luc'n or Lucian who knows the transplanted human colony as well as any Ultron, which isn't very well.

This Lucian is something of a maverick among the Ultrons, who are close to immortal as long as they do not mature sexually (after which they age and die comparatively rapidly); he came close to "puberty" before retarding his maturation, and by Ultron standards is a great, gangling near-adolescent. The Ultrons have another talent; they can physically metamorphose into other "ultoid" (read ethnocentrically for "humanoid") type races; Lucian becomes a human male except for his primary sexual characteristics—to force them might throw him physiologically into sexual maturity and mortality. He also handily happens to contain in his mind the psychological imprints of several ancestors, one of which was a spaceship captain.

Now it may seem as if I've given away two-thirds of the book here, but that's only the *opening* situation—things get a lot more complicated as Lucian and "his" jaunty, raunchy (by his virginal stand-

ards) humans go off to salvage Earth, and actually take up residence there for a while. It's as contrived as a clockwork, wind-up toy, but somehow, Llewellyn keeps it all well-paced and rational, and carries the reader along in what rapidly becomes a really absorbing plot.

There are additional rewards, too. Both Lucian and his human friends are likable people, despite their differences, and they honestly try and get along—no simple black-and-white villainy here (some 'honest-to-goodness baddies they run into on Earth—Ultron foes from the far past—are still curiously respectable). Lucian even develops a sense of humor as to his differences from humankind and is able to get off a wisecrack now and then ("Stop calling me Your Ultimate. It makes me sound like a dead end!") There are also some interesting (and brief) side comments on esthetics and theology.

All in all, more than a few authors could learn from Llewellyn the craft of telling a good, speedy story based on complex ideas without either totally mystifying the reader or stopping dead every other page to explain things. And I learned to do something from this review that I never could before—and that is how to spell Llewellyn without looking.

Procurator

By Kirk Mitchell

Ace, \$2.75 (paper)

What if (oh, famous phrase!)—what if Jesus Christ had been freed by Pilate? The result, according to Kirk Mitchell in his novel

Procurator, is that the Roman Empire did not fall. In fact, it lasted to the present. (It was Pilate's wife, that most myserious historical figure, that bade him not to condemn the "trouble maker"; therefore he was not martyred, therefore Christianity did not take shape, therefore its internal dissent did not weaken the Empire, therefore . . .)

This is, oddly enough, the second novel to be set in a long-lasting Roman Empire in a matter of months, the other being John Christopher's *Fireball*. The Christopher, however, was a very short piece for an adolescent audience (very intelligently done, it must be said) while this new novel is a solid piece of writing aimed at adults. Christopher's alternative split-off point was also a good deal later than Mitchell's, happening in the reign of Julian.

The Procurator of the title is Germanicus Julius Agricola, cousin of the current Emperor Flavius, on a tour of inspection in the Imperial Province of Anatolia (which we know as Asia Minor, or Asian Turkey). The Province is on the verge of revolution; the natives subscribe to a near-Eastern religion very like Islam, and the *zaim* (religious leaders) are fomenting the revolt. There is one *zaim* in particular who lives in a village on the slopes of Ararat who is particularly troublesome and might have the power of *massing*, which is regarded as witchcraft but seems, though unexplained, to resemble a sort of psychokinetic talent.

Germanicus is involved in a troubled love triangle involving one of his Colonels, one Marcellus

of Parthian (Persian) descent, and a female Scandian centurion, Crispa. Women's rights have got that far in the conservative Empire; they have also invented "sand galleys" (tanks), "rail galleys," firearms, and discovered the New World (the Novo Provinces). (The book's cover is a neat depiction of a "sand galley" fording a stream, pictured as a classical Roman ship on caterpillar treads.)

Germanicus's story is full of ambushes, battles, captures, hostage-taking, and intrigue in the Provincial government, and moves along smartly. Perhaps somewhat too smartly—there are times when the reader is almost left behind by the rush of events and the myriad characters. Mitchell also tends to prose that tries a bit too hard ("Each hair on his neck was buzzing in its follicle") and is sometimes unintentionally funny ("They had silenced the Roman sentries without so much as a gurgle being sounded").

But the background of *Procurator* is so intriguingly thought out, so thorough an alternative history, that the lapses in the writing can be forgiven. This subgenre is one of the most difficult in the field—the author must have extrapolative talent *and* know his history—and any addition to it based on this much knowledge is good to find.

The Ghost Light

By Fritz Leiber

Berkley Books, \$7.95 (paper)

Of the older generation of SF writers, Fritz Leiber is probably the most underrated, but as I've noted elsewhere, if some sort of

equation could be made from number of works, variety of works and quality of work, Leiber might well come out on top. It's been a long and amazing career, spread across the genres of science fiction, fantasy, and the supernatural.

The Ghost Light is part of a series called "Masterworks of Science Fiction and Fantasy," illustrated oversize paperbacks devoted to various masters of the field, so Leiber is getting a bit of the recognition he deserves. The publisher says that 40 percent of the book is new material; the rest is chosen from among Leiber's better known short stories, enhanced with new illustrations done for this volume.

There are two pieces of new material, a novella and a memoir. The story is "The Ghost Light," which in other hands might have been a fairly ordinary effort—a house with a tragedy in the past, a mysterious portrait and a horrible death connected with it. Leiber's characters and realistically-drawn background (Marin County) raise it to the level of intriguing. But more intriguing is the memoir, entitled "Not Much Disorder and Not So Early Sex" (from Thomas Mann's "Disorder and Early Sorrow"), which runs to nearly a hundred pages. It will be an enlightening read for Leiber's fans and those interested in the history of SF during and since "The Golden Age"; it is both flip and serious (he is admirably candid about his alcoholism, lapses into and recoveries from). There are also some delicious bits for movie fans—Leiber's father (also Fritz) was one of the great character actors of Hollywood from 1917

(Caesar to Theda Bara's Cleopatra) until midcentury, and the younger Fritz played the (small) role of Valentine in the Garbo *Camille*.

Among the other stories in this collection are "Bazaar of the Bizarre," one of the more famous of the great Fafhrd and the Gray Mouser series (in which Leiber managed to parody the subgenre of sword and sorcery before there was enough of it to be a subgenre); the ultimate feline SF story, "Spacetime For Springers" which I know from experience is one of those stories a lot of people can never remember the author of, but want desperately to reread—well, here it is, folks; and the Nebula-winning "Black Glass" which has not before appeared in a Leiber collection.

There are several illustrators involved, all of whom have done a praiseworthy job. Particularly noteworthy is the illustration done for the Gray Mouser story; not too surprising, since it's by Robert Gould, who did the knockout covers for the new editions of Moorcock's Elric series.

In short, not a bad addition to your Leiberary.

The House on the Borderland
By William Hope Hodgson
Carroll & Graf, \$3.25 (paper)

Can you name an author of SF and fantasy who also made his mark as a bodybuilder and advocate of health foods, an innovator in the art of photography, a winner of a medal for heroism from the Royal Humane Society, and who was tragically killed in one of the great battles of history? Whose one

SF novel ran to 200,000 words (*not* as a series—it is *one* novel)? Whose horror stories are still more frightening than 95 percent of what is passed off as such today?

Can't think of anyone who fits that description? Not surprising—writers of fantasy and SF these days tend to be a bland and mousey lot, at least compared to William Hope Hodgson, who wrote in the early part of the century and who was killed by a shell burst at Ypres.

His *The House on the Borderland* is now again available, and it is perhaps the strangest work of a diverse and strange output. Combining science fiction, fantasy, and horror, as no one has before or since (though there are echoes of Wells' *Time Machine* and intimations of Stapledon), it is the "memoir" of a 19th century Englishman who lives in an ancient house in a deserted section of Ireland (and there were vast areas of that country that were virtually uninhabited after the famine).

To say the house is strange is a whopping understatement, though it isn't haunted in the usual sense. But fearsome and awful things happen there and in its huge and wild estate. Monstrous creatures appear and overrun the garden and lay siege to the house and its inhabitants; the narrator is subject to a trip to the end of the Earth and beyond as he gazes, helpless, from his study window; the house itself seems to have links to areas of space and time beyond imagining.

All of this would be utterly idiotic metaphysical nonsense in any other hands; the narrative is dis-

connected and no coherent explanation of the house and the events that take place in it are ever given. But such is Hodgson's genius (a word I *never* use lightly) that the reader accepts, marvels, and is moved to awe and terror. I have read the novel many times; rereading it for this review in the small hours a few days ago, I yet again was subject to the shakes as the unnamed narrator desperately barricades the doors of the house against the things that are prowling and grunting (yes—grunting) in the night outside.

Shoptalk . . . The publishing history of the works of that admirable author, F.M. Busby, has been confused enough at times to confound any future bibliographers. As a public service, here is the latest wrinkle. Busby's *chef d'oeuvre* is *Rissa Kerguelen* which was originally published as two novels in hard cover, *Rissa Kerguelen* and *The Long View*. These were published as a single, very thick paperback entitled *Rissa Kerguelen*. It is now republished as *three* paperbacks with the titles *Young Rissa*, *Rissa and Tregere*, and *The Long View*. There is also recently published a direct sequel to RK, *The Alien Debt* (Bantam, \$2.75, paper). [Those of you who are still unutterably curious as to what the editor of this magazine looks like will find her on the cover of this book. She's the one on the left.] There are also several spinoff novels. Got all that? There will be a test . . . By the time this sees print, the famous and long-lasting visual format of the DAW books will

have changed. I have #1, the very first DAW, to hand here (*Spell of the Witch World* by Andre Norton) and there is the same familiar yellow spine and distinctive look. Time marches on, all things change, but we will miss that look. DAW, of course, will maintain the editorial and publishing individuality which has brought us so many new writers of interest (Lee and Cherryh, for instance). . . . Finally the long-awaited third of John Varley's trilogy (*Wizard* and *Titan* being the first two) has appeared, after several delays. It's called *Demon* (Berkley, \$6.95).

Dune lovers will be fascinated with *The Dune Encyclopedia* compiled by Dr. Willis E. McNelly (Berkley, \$9.95, paper). It's an impressive tome containing "all the people, places, history, geography, ecology, battles, births, creatures, customs, sciences, arts, languages, and background" of Herbert's books arranged encyclopedically. The only thing it *doesn't* seem to contain is the apocryphal Dune library (the all-rabbit Dune novel, *Watership Dune*; the Harlequin Romance Dune

novel, *Dune Bride*; the musical comedy *Dune, Brigadune* et al.) . . . And to continue ending on a lighter note, I was delighted with the distinguished-looking gentleman who came into The Science Fiction Shop the other day and asked in a loud, clear voice for *Lord Fane's Bowels*. Staff and customers kept a straight face until he left happily with a copy of Donaldson's *Lord Foul's Bane*.

Recent publications from those associated with this magazine include: *100 Great Fantasy Short Stories* edited by Isaac Asimov, Terry Carr, and Martin H. Greenberg, Doubleday, \$15.95; *Isaac Asimov's Wonderful Worlds of Science Fiction #2: The Science Fictional Olympics* edited by Isaac Asimov, Martin H. Greenberg, and Charles G. Waugh, NAL, \$3.50 (paper).

Books to be considered for review in this column should be submitted to Baird Searles, % The Science Fiction Shop, 56 8th Ave., New York, N.Y. 10014. ●



NEXT ISSUE

Our November cover story, "The Kindly Isle," is a touching tale by Frederik Pohl. Other stories include "Findoklin's Way" by Robert F. Young and "End Cruise" by Rand B. Lee, and we'll have an intriguing Viewpoint article, "Things Unflattened by Science," by Lewis Thomas. Look for it September 25, 1984.

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SF CONVENTIONAL CALENDAR

by Erwin S. Strauss

This is the season for many European con(vention)s. Some offbeat cons are also on tap in the wake of the LA WorldCon, leading in to the Fall con season. Make plans now for social weekends with your favorite SF authors, editors, artists, and fellow fans. For a longer, later list, an explanation of cons, and a sample of SF folksongs, send me an SASE (addressed, stamped #10 (long) envelope) at 9850 Fairfax Sq. #232, Fairfax VA 22031. (703) 273-6111 is the hot line. If a machine answers, leave your area code & number. I'll call back on my nickel. Send cons an SASE when writing. Look for me behind the Filthy Pierre badge at cons.

AUGUST, 1984

30-Sep. 2—LA Con 2. For info, write Box 8442, Van Nuys CA 91409. Or phone (714) 999-8900 (10 am to 10 pm only, not collect). Con will be held in Anaheim CA (if city omitted, same as in address) at the Convention Center. Guests will include Gordon R. (Dorsai) Dickson, Robert ("Psycho") Bloch, Jerry Pournelle. The World SF Convention for 1984. Join at the door for \$75.

30-Sept. 2—French Nat'l Con, % Ruf, 140 rue Gounod, F-54000 Vandœuvre, France. Nancy, France.

SEPTEMBER, 1984

7-9—GeneLuxCon, % De Rycke, Eendeplass-str. 70, B-9050 Evergem, Belgium. Bent, Belg. Sheckley

7-9—CopperCon. SunBurst Resort, Scottsdale AZ. Somtow Suchantkul, Samuel Edward Konkin III.

7-9—EarthCon. Holiday Inn, Wycliffe (Cleveland) OH. P. Anderson, S. Jackson. Media-oriented con

21-23—September Party, 2508 W. 9th, Panama City FL 32401. Cookout. Verrrry relaxed

21-23—Ohio Valley Filk Fest, Box 14078, Columbus OH 43214. Gordon R. Dickson, Julia Ecklar, Murray Porath. The annual Midwest SF-folksinging (filksinging) con sponsored by Filk Foundation.

21-23—CircleCon, Box 11602, Indianapolis IN 46219. The (Elfquest) Pln's celebrate a wolf park.

21-23—MosCon, Box 8521, Moscow ID 83843. F. M. Busby, artists Alicia Austin & W. R. Warren Jr.

22—BrunnerCon. Hotel Calgary, Via Lungomare Sud 22, Abruzzo, Italy. For his 50th birthday, John Brunner treats all comers to wine & a buffet dinner. Contact hotel (\$21/day room & board) for info.

28-30—Ad Astra, Box 7276, Stn. A, Toronto ON M5W 1X9. Dean Ing, fan Robert (Doc) Passovoy.

OCTOBER, 1984

5-7—Contradiction, 147 Huntington Ave., Buffalo, NY 14214. Donald Kingsbury, Samuel R. Delany. Masquerade. Chocolate symposium/pigout. Batsu breakfast. People auction. Last fling before winter.

12-14—World Fantasy Con, Box 4911 Stn. E, Ottawa ON K1S 5J1. Tanith Lee, Jane Yolen, Jeff Jones, Spider Robinson. Award banquet. The WorldCon for fantasy fans. Has emphasized dark fantasy (horror, sword/sorcery, etc.), but is trying to include high fantasy (Tolkien, C. S. Lewis, etc.).

AUGUST, 1985

22-26—AussieCon 2, 11663 W. Jefferson Blvd. #1, Culver City CA 90230. Melbourne, Australia. The WorldCon for 1985. Gene (New Sun) Wolfe, editor/fan Ted White. Join for \$50 until the end of 1984.

30-Sep. 2—ChiliCon, Box 9612, Austin TX 78766. The North American SF Interim Con for 1985 (NASFIC's are held only in years when WorldCon is outside North America). 3000 fans expected.

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